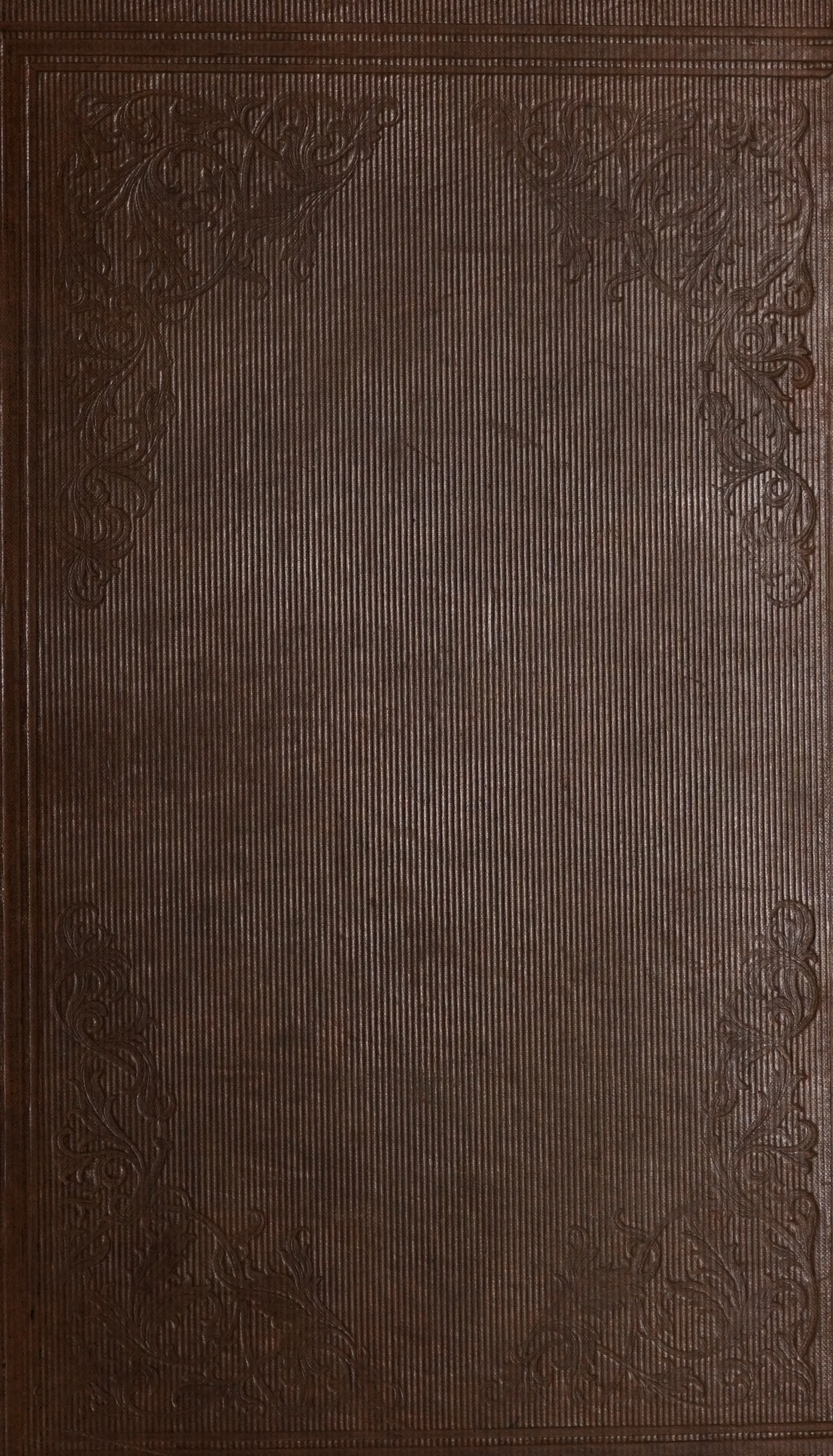




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THE
PRINTERS' MANUAL;
CONTAINING
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INSTRUCTIONS TO LEARNERS,
WITH
SCALES OF IMPOSITIONS,
AND NUMEROUS
CALCULATIONS, RECIPES, AND SCALES OF PRICES
IN THE PRINCIPAL TOWNS OF GREAT BRITAIN:
TOGETHER WITH
PRACTICAL DIRECTIONS FOR CONDUCTING EVERY DEPARTMENT
OF A PRINTING OFFICE.

BY C. H. TIMPERLEY.

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INTRODUCTION.

THE present compilation is not offered to the profession with the consequential importance of a new work, nor is it any part of my pretension to offer to the experienced printer any instructions for the guidance of his business; but by collecting such information as has been accumulated by the labours of those who have written before on the subject, I may be enabled to concentrate all that is useful and requisite to the inexperienced apprentice, or journeyman, who has not had the means of purchasing more expensive works upon the art of typography. Utility has been the chief object I have had in view; every thing inserted will be found useful, and, to the utmost of my abilities, every subject has been explained in as clear and concise a manner as possible; and it is therefore hoped that this work will be found generally acceptable to those for whose instruction it has been undertaken. Many things have been added which have not as yet appeared in a *Printers' Grammar*, new tables of calculations, plans of imposition, and scales of prices, as paid in London, Dublin, Edinburgh, Glasgow, Manchester, Liverpool, Leeds, York, Belfast, and other principal towns of the united kingdom.

The first work written in England expressly for the use of the trade, was Smith's *Printers' Grammar*, 1755, which consequently laid the foundation-stone for all his successors; Luckcombe's *History and Art of Printing*, 1770; Stower's *Printers' Grammar*, 1808; Johnson's *Typographia; or, the Printers' Instructor*, 1824; and Hansard's *Typographia*, 1825. Stower says that Smith's was the foundation of his work: Luckcombe compiled his book from three sources; namely, Ames's *Typographical Antiquities*, for the historical part—Smith's *Printers' Grammar*, for the practical part of the composing department—and Moxon's *Mechanical Exercises*, for the press-work. It is very clear that Luckcombe made free use of his predecessor as far as he went; for, upon a close comparison, much of Luckcombe will be found to be plagiarised from Smith, altered a little in arrangement and phraseology; and that, in his turn, Stower copied from Luckcombe. Smith, from his own acknowledgment, appears to have compiled his book under very adverse circumstances, and solely with a view to relieve himself from his embarrassments. It is plain he only went half-way through with his design, since his volume treats only upon the business of a compositor, omitting all that relates to the completion of printing; never mentioning press or pressman. Hansard says that his work is partly formed upon the basis of the *Printers' Grammar* published by Mr. Stower; and Johnson acknowledges the sources from whence he compiled his *Typographia*. Thus it plainly appears, that each writer of a *Printers' Grammar* has not hesitated to take from his predecessor all that he thought requisite to form his own.

As it is difficult to fix a starting-post, so every one of my predecessors have chosen a different mode of initiating the inexperienced youth in the best method of obtaining a perfect knowledge of the art of typography, I have thought it the most judicious plan to give a concise *Essay on Punctuation*, (not with a view of laying down any rule, which is almost impracticable,) and so lead the learner progressively to a perfect attainment of all that is requisite in a printing-office. An uniform and correct mode of pointing must be acquired by the compositor from practice and attention.

ON PUNCTUATION.

PERHAPS there never existed on any subject, among men of learning, a greater difference of opinion than on the true mode of punctuation, and scarcely can any two people be brought to agree in the same method; some making the pause of a semicolon where the opinion of others would only place a comma; some contending for what is termed stiff pointing, and others altogether the reverse.

The want of an established rule in this particular is much to be regretted. The loss of time to a compositor, occasioned often through whim or caprice, in altering points unnecessarily, is one of the greatest hardships he has to complain of in his profession. It is rare, indeed, to meet with a work sent properly prepared for the press; either the writing is illegible, the spelling incorrect, or the punctuation defective. The compositor has often to read sentences of his copy more than once before he can ascertain what he conceives the meaning of the author, that he may not deviate from him in the punctuation; this retards him considerably. But here it does not end—he, and the corrector of the press, though, perhaps, both intelligent and judicious men, differ in that in which so few are found to agree, and the compositor has to follow either his whim or better opinion. The proof goes to the author—he dissents from them both, and makes those alterations in print which ought to have rendered his manuscript copy correct. The author should, in the first instance, send his copy properly marked in this respect. He must be the most competent judge of the length and strength of his own sentence, which the introduction of a point from another might materially alter, a circumstance not uncommon, as instances continually occur where a single point will completely reverse the meaning of a sentence.

The late Dr. Hunter, in reviewing a work, had occasion to censure it for its improper punctuation. He advises authors to leave the pointing entirely to printers, as from their constant practice they must have acquired a uniform mode of punctuation. I am decidedly of this opinion; for unless the author will take the responsibility of the pointing entirely on himself, it will be to the advantage of the compositor, and attended with less loss of time, not to meet with a single point in his copy, unless to terminate a sentence, than to have his mind confused by commas and semicolons placed indiscriminately, in the hurry of writing, without any regard to propriety. The author may reserve to himself his particular mode of punctuation, by directing the printer to point his work either loosely or not, and still have the opportunity of detecting in his proofs whether a misplaced point injures his sentence. The advantage resulting from this method would insure uniformity to the work, and remove in part from the compositor a burthen which has created no small degree of contention.

Punctuation may be considered in two different lights: first, as it clears and preserves the sense of a sentence, by combining those words together that are united in sense, and separating those that are distinct; and, secondly, as it directs to such pauses, elevations, and depressions of the voice, as not only mark the sense of the sentence, but give it a variety and beauty which recommend it to the ear; for in reading, as in other arts, the useful and the agreeable are almost always found to coincide; and every real embellishment promotes and perfects the principal design.

The comma (,) represents the shortest pause; the semicolon (;) a pause double that of the comma; the colon (:) one half longer than that of the semicolon; and the period (.) double that of the semicolon.

The COMMA, having the first place in every sentence, though, strictly speaking, it may be considered a junior stop, governs the order of all others; therefore the ready way to uniform pointing is, to acquire a perfect knowledge of this key to punctuation. The comma, which is the shortest pause, usually separates those parts of a sentence which, though very closely connected in sense and construction, require a pause between them, and are not absolutely necessary to the sense; and it has a parenthetical power.

With respect to a simple sentence, the several words of which it consists have so near a relation to each other, that, in general, no points are requisite, except a full stop at the end of it; as, "The fear of vice is the beginning of wisdom." "Every part of matter swarms with living creatures." A simple sentence, however, when it is a long one, and the nominative case is accompanied with inseparable adjuncts, may admit of a pause immediately before the verb; as, "The good taste of the present age, has not allowed us to neglect the cultivation of the English language." "To be totally indifferent to praise or censure, is a real defect in character." When words are placed in opposition to each other, or with some marked variety, they require to be distinguished by commas; as,

" Though deep, yet clear; though gentle, yet not dull;
Strong without rage; without o'erflowing full; "

A remarkable expression, or a short observation, somewhat in the manner of a quotation, may be properly marked with a comma; as, "It hurts a man's pride to say, I do not know;" "Plutarch calls lying, the vice of slaves."

In printing, commas are used to denote extracts or quotations from other works, in dialogue matter, or any passages or expressions not original, by inverting two of them, and placing them before the passage quoted, and closing such passage with two apostrophes. These are termed "inverted commas;" and when used, a thick space is sufficient to keep them free from the matter. A quotation within a quotation, has only one inverted comma; and should the quotation finish the sentence, three apostrophes are placed, observing after the first to place a thin space. A single comma inverted is used as an abbreviation to the word Mac, in lieu of a superior (°), as in the instance of M'Creery. The method of running inverted commas down the sides to the end of the quotation has been found inconvenient, and is now become almost obsolete.

The SEMICOLON is sometimes used when the preceding member of the sentence does not of itself give a complete sense, but depends on the following clause: and sometimes when the sense of that member would be complete without the concluding one; as in the

following instances: "As the desire of approbation, when it works according to reason, improves the amiable part of our species in everything that is laudable; so, nothing is more destructive to them, when it is governed by vanity and folly." "Experience teaches us, that an entire retreat from worldly affairs, is not what religion requires; nor does it even enjoin a long retreat from them." "Straws swim upon the surface; but pearls lie at the bottom."

It is also used to connect phrases which are used substantively, and fall under the same government, when they are of any number or length; as, "Philosophers assert, that Nature is unlimited in her operations; that she has inexhaustible treasures in reserve; that knowledge will always be progressive; and that all future generations will continue to make discoveries, of which we have not the least idea." "Charity prevails not; religion is a mere trade; men do not love each other; even brothers are enemies; these are the sorry proofs of our civilization!"

The COLON is used when a sentence can be divided into two parts, either of which is again divisible by a semicolon, the former are to be separated by a colon; as in the following sentence: "As we perceive the shadow to have moved along the dial, but did not perceive it moving; and it appears the grass has grown, though nobody saw it grow: so the advances we make in knowledge, as they consist of such minute steps, are only perceivable by the distance." The colon has been superseded, in almost every instance, either by the semicolon, ellipsis line, or metal rule, and in some cases by the comma; neither is its utility in figure-work any longer acknowledged. The propriety of using a colon, or semicolon, is sometimes determined by a conjunction, or some other word of a connecting nature being expressed, or not expressed; as, "Do not flatter yourselves with the hope of perfect happiness: there is no such thing in the world:" or, "Do not flatter yourselves with the hope of perfect happiness; *for* there is no such thing in the world:"

"Where grows?—where grows it not? In vain our toil,
We ought to blame the culture, not the soil,
Fix'd to no spot is happiness sincere:
'Tis nowhere to be found, or ev'rywhere."

In pointing the psalms and some parts of the liturgy, a colon is often used to divide the verse, into two parts, to suit a particular species of church music called *chanting*; as, "My tongue is the pen: of a ready writer."

The PERIOD, or full point, is used to terminate a sentence. Some sentences are independent of each other, both in their sense and construction; as, "Honour the king. Have charity towards all men." Others are independent only in their grammatical construction; as, "A good man changes not, either in his desire to promote our happiness, or in the plan of his administration. One light always shines upon us from above. One clear and direct path is always pointed out to man."

A period may sometimes be admitted between two sentences, though they are joined by a disjunctive or copulative conjunction; for the quality of the point does not always depend on the connective participle, but on the sense and structure of sentences; as, "Recreations, though they may be of an innocent kind, require steady government to keep them within a due and limited province. But such as are of an irregular and vicious nature, are not to be governed, but to be banished from every well-regulated

mind." "Full points are sometimes used as leaders in tables of contents, figure-work, &c.; but dotted rules (...) are much better for this purpose, from their uniform appearance, as they not only supply the place of full points and quadrats, but save considerable time in the composition.

The INTERROGATION (?) is used when a question is asked, and the pause is rather longer than that allowed to the full point.

The ADMIRATION, or EXCLAMATION (!) is used to express any sudden emotion of the mind ; and the pause is regulated like that of the interrogation ; as,

" These are thy glorious works, Parent of Good !
Almighty ! Thine this universal frame,
Thus wondrous fair ! Thyself how wondrous then !"

Exclamations are sometimes mistaken for interrogations, and *vice versâ*; care should, therefore, be taken in examining to which of these two variations the one or the other inclines. The Portuguese and Spanish typographers guard against this mistake by placing the interrogation reversed at the beginning of a sentence.

All points, except the comma and full point, have a hair space placed between them and the matter, to distinguish them ; the comma and full point, not lining with the depth of the face of the letter, do not require any space to bear them off.

The DASH (—) may be introduced with propriety where the sentence breaks off abruptly ; where a significant pause is required ; or where there is an unexpected turn in the sentiment ; as, " If acting conformably to the strict rules of morality ;—if promoting the welfare of mankind around us ;—if securing our own happiness ;—are objects of the highest moment :—then we are loudly called upon to cultivate and extend the great interests of religion and virtue." When the sense is broken off and resumed, the interjected part should be enclosed by dashes ; as, " Wast thou—alas ! how fallen !—once so respected." A dash following a stop, denotes that the pause is to be greater than if the stop were alone ; and when used by itself requires a pause of such length as the sense alone can determine ; as,

" Here lies the great—False marble, where ?
Nothing but sordid dust lies here."

" Whatever is, is right.—This world, 'tis true,
Was made for Cæsar—but for Titus too."

The PARENTHESIS () is used to enclose some necessary remark in the body of another sentence ; but commas are now more generally used than parentheses.

" Know then this truth, (enough for man to know,)
Virtue alone is happiness below."

" And was the ransom paid ? it was ; and paid
(What can exalt his bounty more ?) for thee."

The parenthesis generally marks a moderate depression of the voice, and may be accompanied with any point which the sense would require, if the parenthetical characters were omitted.

The APOSTROPHE (') is used to abbreviate or shorten a word ; as, " 'tis for *it is* ; *tho'* for *though* ; *e'en* for *even* ; *judg'd* for *judged* : " its chief use is to show the possessive

case of nouns ; as, "A man's property, a woman's ornament." The monosyllables *tho'* and *thro'* are sometimes shortened, but without any appearance of propriety to justify the curtailment, as they retain the same sound, and therefore the apostrophe cannot assist the versification. All quotations, which are denoted by beginning with inverted commas, are closed with apostrophes. There is generally a hair space required between the apostrophe and the matter.

The CARET (^) is used to show that some word is either omitted or interlined.

The HYPHEN (-) is used to divide words or syllables ; and to do this with propriety is an important part of a compositor's business. It will exercise his judgment, and demands particular attention, as authors must leave its use to the discretion of the printer. The difficulty that formerly existed as to the proper method of dividing syllables, arose from the controversies in which authors were continually engaged on the subject of orthography. Without being able to establish a criterion, each arrogated to himself the adoption of his own particular mode, to the subversion of uniformity and propriety.

Authors of the present day seldom interfere with what is deemed the province of the printer : they will generally allow him, from his practice, to be a pretty competent judge of orthography, and therefore do not object to his mode of spelling, though it may vary from their own. To the compositor this is an advantage of considerable importance, as it allows him to observe a system in his spelling, and enables him, at the same time, to acquire the proper use of the division, in which he should be careful not to suffer a syllable of a single letter to be put at the end of a line, as *a-bide*, *e-normous*, *o-bedient*, &c., except in marginal notes, which, from their narrow measure, cannot be governed by this rule. The terminating syllable of a word should not be allowed to begin a line, as, *ly*, *ed*, &c., the hyphen being the thickness of one of the letters ; the measure must, therefore, be very narrow, or the line very closely spaced, that will not admit the other. A compositor who studies propriety and neatness in his work, will not suffer an unnecessary division, even in a narrow measure, if he can avoid it by the trouble of overrunning two or three lines of his matter.

In large type and narrow measures the use of the division may admit of an excuse ; but, in that case, care should be taken that they do not follow each other. In small type and wide measures the hyphen may generally be dispensed with, either by driving out or getting in the word, without the least infringement on the regularity of the spacing. The habit once acquired of attending to this essential point, the compositor would find his advantage in the preference given to his work and the respect attached to his character, from his being considered a competent and careful master of his business. The appearance of many divisions down the side of a page, and irregular spacing, are the two greatest defects in printing.

It is proper, if possible, to keep the derivative, or radical word, entire and undivided ; as, *occur-rence*, *gentle-man*, *respect-ful*, &c. The hyphen, or division, is likewise used to join two or three words together, which are termed compounds, and consist frequently of two substantives, as *bird-cage*, *love-letter*, &c. ; likewise what are termed compound adjectives, as *well-built house*, *handsome-faced child*, &c. But compounds are sometimes made of words that were never intended for such ; therefore, to acquire a competent knowledge of them does not depend upon fancy, but exercises the judgment in discovering

the rise and fall of the tone, which is an adjunct; and whether that and the preceding appellative may not be joined into one word, rather than make a compound of it.

The prepositions *after*, *before*, *over*, &c., are often connected with other words, but do not always make a proper compound; thus, *before-mentioned* is a compound when it precedes a substantive, as, "In the *before-mentioned* place;" but when it comes after a noun, as, "In the place *before mentioned*," it should be two words. Divisions are sometimes used in table-work, indexes, or contents; but, like the full point, they are now generally superseded by leaders; for they will not always come off clear, and frequently cut the paper, unless worked with extraordinary care. Hyphens should not be cast of too thick a body; their principal use is in justifying and correcting, therefore they cannot be too thin to be serviceable: they do not require a very bold stroke, except for spelling-books, for which they are generally cast on purpose.

ON REFERENCES, &c.

REFERENCES are those marks, or signs, which are used in a work with side or foot notes, to direct the reader to the observations they may contain on that part of the text to which the reference may be attached, the note having a corresponding mark of reference. They are variously represented; those generally in use are the

Asterisk . . *	Double-dagger ‡	Parallel . .
Dagger . . †	Section . . §	Paragraph . . ¶

The above are the names and figures which founders reckon among the points, and are denominated references by printers. These characters were designed to serve other purposes than those to which they have been applied, as will appear from their respective functions.

1. The **ASTERISK** (*) is the chief of the references, and presents itself most readily to the eye, on account of having its figure on the top, and leaving a blank below, which makes it a superior. In Roman church-books, the asterisk divides each verse of a psalm into two parts, and marks where the responses begin; which in our common prayer-books is done by placing a colon between the two parts of each verse. They are sometimes used to supply the name of a person who chooses to pass anonymous. They also denote an omission, or a hiatus, by loss of original copy; in which case the number of asterisks is multiplied according to the largeness of the chasm; and not only whole lines, but frequently whole pages are left blank, and marked with lines of stars. In satyriizing persons in pamphlets and public papers, the asterisk is of great service; for it is but putting the first letter of a person's name, with some asterisks after it, and is frequently used by those who wish to characterize, and even libel, others, without restriction.—Metal rules also serve for the above purposes as well as asterisks.

2. The **DAGGER** (†), originally termed the Obelisk, or Long Cross, is frequently used in Roman Catholic church-books, prayers of exorcism, at the benediction of bread, water, and fruit, and upon other occasions, where the priest is to make the sign of the cross; but it must be observed, that the long cross is not used in books of the said kind,

unless for want of square crosses, which are the proper symbols for the before-mentioned purposes; and are used besides in the pope's briefs, and in mandates of archbishops and bishops, who put it immediately before the signature of their names. But the square cross is not reckoned among references of which we are speaking; whereas, the long cross answers several purposes; for, besides serving instead of a square cross, it also answers for a signature to matter that has been either omitted, or else added, and which is intercalated after the work has gone beyond the proper place for it. But the chief use which is made of the dagger, is by way of reference, where it serves in a double capacity, viz., the right way, and inverted.

3. The DOUBLE DAGGER (†) is a mark crowded in to make one of the improper references.

4. The SECTION (§) is a sort likewise seldom employed, because in a work which is divided into chapters, articles, paragraphs, sections, or any other parts, they are commonly put in lines by themselves, either in large capitals, small capitals, or italic, according to the size of the work. But the section is sometimes used in Latin notes, and particularly such as are collected from foreign books, which generally abound with citations, because their introduction induces the reader to account his author very learned.

5. The PARALLEL (||) is another sign which serves for a reference, and is fit to be used either for side or bottom notes.

6. The PARAGRAPH (¶) is a mark which formerly was prefixed to such matter as authors designed to distinguish from the mean contents of their works; and which was to give the reader an item of some particular subject. At present, paragraphs are seen only in bibles, where they shew the parts into which a chapter is divided, and where its contents change. In common prayer-books, paragraphs are put before the matter that directs the order of the service, and which is called the Rubric; because those lines were formerly printed in red. Otherwise it is a useless sort, and unfit to serve for a reference, as long as there are others which have not that antique appearance.

References which look the neatest, besides being the most proper, are superior letters, or else superior figures; for both were originally contrived and intended to be employed in matter that is explained by notes, whether by way of annotations, quotations, citations, or otherwise. Nevertheless, we observe that superior letters are not used upon every occasion, but chiefly in large and lasting works, which have sometimes more than one sort of notes, and therefore require different references; in which case not only superior letters, but also such marks are used as never were designed to serve for references. Another reason why superior letters are not used upon all occasions, is, that they are often objected to by gentlemen who choose to read copious notes first, and then refer to the text, where they fancy superior letters not conspicuous enough to be readily discovered.

CROTCHETS or BRACKETS [] serve to enclose a word or sentence, which is to be explained in a note, or is the explanation itself, or is a word or sentence which is intended to supply some deficiency, or to rectify some mistake. Both parentheses and crotchets were formerly used to enclose folios, &c.; but the modern method of putting folios in full-faced figures, unattended, leaves the crotchet scarce a duty to perform: its chief application is in dictionaries, for what are called *lock-up* words.

AN INDEX or HAND () points out a remarkable passage, or something that requires particular attention.

AN ELLIPSIS (—) is used when some letters in a word, or some words in a verse are omitted ; as, "The k—g," for "the king."

BRACES are used chiefly in tables of accounts and similar matter, that consist of a variety of articles, which would require much circumlocution, were it not for the method of tabular writing, which is practised in England to greater perfection than in any other nation. A brace is used in poetry at the end of a triplet or three lines, which have the same rhyme ; as in the following example :

" Who haunt Parnassus but to please the ear,	}
Not mend their minds ; as some to church repair,	
Not for the doctrine, but the music there."	

Braces stand *before*, and keep together, such articles as are of the same import, and are the subdivisions of preceding articles. They sometimes stand *after*, and keep together, such articles as make above one line, and have either pecuniary, mercantile, or other posts after them, which are justified to answer to the middle of the brace. The extreme points of a brace are always turned to that part of an article which makes the most lines. Braces are sometimes used horizontally in the margin to cut off a chronological or other series from the proper notes, or marginal references, of the work. They are generally cast to two, three, and four m's of each fount, but can be made larger if ordered. When there is occasion for them larger, *middles* and *corners* are cast, and used with metal rules, so that the brace may include any space required ; but the middles and corners, as well as the metal rules, require to be cast with great exactness, that, when joined, they may appear as one piece ; their shoulders in dressing should be planed away, so that the beard will not prevent the face from meeting. The difficulty of nicely effecting this has caused some printers, most eminent for their skill and experience in table-work, to form their braces out of brass rule to the exact lengths required for each occurring instance. Middles and corners are convenient in genealogical works, where they are used the flat way ; and where the directing point is not always in the middle, but has its place under the parent, whose offspring stands between corner and corner of the brace inside, in order of primogeniture ; but this may also be superseded to advantage by the judicious use of brass rule.

In concluding this portion of the work, I must impress upon the learner the great importance of punctuation, and every particular which I have included under that head. The greatest mistakes are occasioned by the gross inattention which is too commonly paid to this important section of grammar ; and the whole meaning of a sentence or a paragraph may be directly changed by the improper use of a single point, while, by an injudicious paragraph or a full period, observations applying to one subject may be appropriated to another, to which they in no way relate. There is on record an instance of an act of parliament (which might have involved a question of life and death) having a direct contrary meaning to that which was intended, in consequence of a comma being used instead of a period. Smith observes, "that to perfect oneself, therefore, in placing a comma right, is the ready way to fair pointing ; but to set down rules for arriving to it, would be endeavouring in vain, since practice is the surest guide. Neither is it supposed that those who initiate themselves for the art, should be so destitute as not to understand

pointing, even according to the rules of spelling-books. But to have done with the comma, permit us to conclude with this similitude, viz., 'He that will not say A will not say B;' by which we should intimate, that he who will not endeavour to place a comma properly, will not know where to put a semicolon, or other point; and therefore ought to learn it by dint of a bodkin."

ON COMPOSING.

THE workmen employed in the art of printing are denominated, according to the particular department they fill, COMPOSITORS and PRESSMEN. The compositors are those whose business it is to arrange and dispose the types, or letters, into words, lines, sentences, pages, and sheets, agreeably to the copy furnished by the author or editor. The pressmen, strictly speaking, are the printers, as they take off the impressions on the paper, after the types have been arranged by the compositor. First, on COMPOSING.

The question still remains undecided with many masters, as to the most proper part of the business which should engage the attention of the learner without confusing his ideas; various methods are adopted, each following the mode he thinks best. Sorting pie is generally the first employment, and afterwards to set it up, which unquestionably gives the youth a strong insight into the nature of the business, making him acquainted with the different sizes of type and the method of composing, and prepares his understanding for the comprehension of whatever direction may be given him when he is put to the case. The young beginner will do well to attend to the few hints here offered before he enters on the business of composing. Composing is a term which includes several exercises of the mind as well as the body; for when a man is said to compose, he is at the same time engaged in reading and spelling what he is composing; and, it is therefore essentially necessary that he should not only possess a competent knowledge of punctuation, but of reading the various hand-writings that may be given to him to work from. One of the worst faults which can befall a youth, is contracting a bad habit of standing to his case; for so great is the evil resulting from it, that nothing but a determined perseverance in those who have experienced their ill effects can conquer them. There are many men now working in the trade who frequently reflect, and with much justice, on the persons under whose care they were brought up, for omitting to check them in those ill-becoming postures which produce knock-knees, round shoulders, or other deformities. It is to be regretted, that those who undertake so important a charge as the instruction of youth in the first rudiments of our art are not better qualified for the task, or do not bestow on their trust a greater attention. What to a learner may appear fatiguing, time and habit will render familiar and easy; and though to work with his cases on a level with his breast, may at first tire his arms, yet use will so inure him to it, that it becomes afterwards equally unpleasant to work at a low frame. His perseverance in this mode will be strengthened by the reflection, that it effectually prevents his becoming round-shouldered, a distinguishing mark by which compositors above the common stature are generally known. This method will likewise keep the body in an erect position, and prevent those effects which result from pressure on the stomach. The standing position should be easy,

with the feet not too much apart; neither should the idle habit of resting one foot on the bed of the frame be encouraged, or standing with one foot bent inwards, the certain forerunner of deformity. The head and body must be kept perfectly steady, the arms alone performing the operations of distributing and composing. An ill habit once acquired is with difficulty shaken off:—the variety of motions exhibited by some compositors are truly ludicrous; such as nodding the head, agitating the body, throwing out the arm, ticking the letter against the case or the setting rule, with many other ridiculous and false movements, which not only occasion loss of time, but fatigue the mind and exhaust the strength of the body: the swift movement of the hand is not the criterion of a quick compositor.

The two following plans of cases are here given, a knowledge of which is easily acquired by attention. The first upon the old plan, and the second upon the new.

UPPER CASE on the Old Plan.

A	B	C	D	E	F	G	A	B	C	D	E	F	G
H	I	K	L	M	N	O	H	I	K	L	M	N	O
P	Q	R	S	T	V	W	P	Q	R	S	T	V	W
X	Y	Z	Æ	Œ	U	J	X	Y	Z	Æ	Œ	U	J
ä	ë	ï	ö	û	—	ℒ	â	ê	î	ô	ù	ÿ	±
1	2	3	4	5	6	7	á	é	í	ó	ú		†
8	9	0	¼	½	¾	k	à	è	ì	ò	û	¶	*

LOWER CASE on the Old Plan.

—	]	æ	œ	'	j		middle spaces	(	?	!	;	..	fi
&						e						thin	ff
hair spaces	b	c		d			i	s		f	g	space	fi
ffi	l	m		n		h	o	y	p	,	w	n quadrats	m quadrats
z										q	:		
x	v	u		t		spaces	a	r				Quadrats.	

It is necessary to observe, that the cases partially differ in most offices; though the following plan is generally adopted. The transposition of the capitals and small capitals, from the higher to the lower compartments of the upper case, can scarcely be considered an alteration, although it is attended with considerable advantage, because they

do not break in upon their regular alphabetical arrangement. It requires no argument to prove, that the shorter the distance the fingers have to reach, the sooner they grasp their object; consequently, those letters most in request cannot be brought too near the hand. Some may consider the distance from one box to another too trifling to demand our notice; so it really is, in an abstract point of view; but when that space, however short, is multiplied by the number of times which the hand has to traverse over the case in the course of one day, much less a week, it would make this comparative trifle amount to a space almost beyond credibility. In newspaper offices the upper case varies considerably; and in Scotland both the upper and lower are laid upon a very different plan.

It will be observed, that there are some sorts which are not laid: the fractions may be arranged where the accents are put, in the left-hand boxes of the upper case; this, of course, will depend upon the nature of the work which may be in hand.

UPPER CASE on the New Plan.

à	è	ì	ò	ù	§	±	á	é	í	ó	ú	—	}
â	ê	î	ô	û		†	â	ê	î	ô	û	—	}
!	?	[	fi	fi	¶	*	æ	œ	ℒ	lb	℥	¢	℥
A	B	C	D	E	F	G	A	B	C	D	E	F	G
H	I	K	L	M	N	O	H	I	K	L	M	N	O
P	Q	R	S	T	V	W	P	Q	R	S	T	V	W
X	Y	Z	Æ	Œ	U	J	x	y	z	æ	œ	u	j

LOWER CASE on the New Plan.

1	2	3	4	5	6		middle spaces	7	8	9	0	(	fi
&						e						,	ff
hair spaces	b	c		d			i	s		f	g		fi
k												n quadrats	m quadrats
j	l	m		n		h	o	y	p	,	w		
z										q	:		
x	v	u		t		spaces	a	r				Quadrats	
										.	-		

The upper case is divided into ninety-eight partitions, all equal in size, and which are adapted to receive those parts of the fount least in use, namely, two alphabets of the capital letters, denominated, the one “full” and the other “small” capitals: also the figures, accented letters, characters used as references to notes, &c. The lower case is

appropriated to the small letters, double letters, points, some other marks used in printing, the spaces, and the quadrats. The boxes or partitions are in such approximation as to be most convenient to the hand of the compositor. Each sort of letter has a larger or smaller box allotted to it according as it is known to be more or less frequently wanted in the language for which it is intended. Thus the e has the largest box; the a, c, d, h, i, m, n, o, r, s, t, u, the spaces, and the quadrats, boxes of the next size; b, f, g, l, p, v, w, y, boxes half the size of those used for the last-mentioned sorts; while j, k, q, x, z, ; : .
() [] æ, œ, &, double letters, &c., &c., have only partitions of a quarter of the size.

Having made himself perfectly acquainted with the upper and lower cases, and with the face of the letter, to enable him to distinguish between the b and the q, the d and the p, the n and the u, &c., he is generally put to distributing, or conveying the different sorts of letter to their respective apartments. He should be cautioned not to take up too much matter at a time, for, should he break a handful, he will have the less pie to clear. Even to those who are not likely often to meet with this accident, the caution is not unnecessary, as too great a weight weakens the wrist, and it is a mistaken notion that it gains time, for if one handful fall into the case, it will be more than equivalent to the time saved. When the accident takes place, the pie should be immediately cleared away.

In taking up a handful, the head of the page should be towards the distributor, which prevents the trouble as well as danger of turning it round, in order to have the nick uppermost. So much matter should only be taken up at a time as can be conveniently held in the left hand, and not to be higher than the thumb, which guards the ends of the lines from falling. He should be careful not to throw the letters into the case with their face downwards, as it batters them; neither should he distribute his case too full, for it invariably creates pie. He should not be too impatient to gain the reputation of a swift compositor; his principal study should be to acquire a proper method, though his progress be slow; this attained, expedition will follow from practice, and he will find his advantage in composing from a clean case, though he may be longer in distributing it. A man loses double the time in correcting that he imagines he saves from quick and slovenly distribution.

With many compositors much time is unnecessarily lost in looking at the word before they distribute it. By proper attention in the learner he may avoid this, and become, without the appearance of hurry, an expeditious as well as clean distributor—to attain which, he is recommended never to take more letter between his fingers than he can conveniently hold, and if possible, always to take an entire word; to keep his handful on an inclining position, so that the face of the letter may come more immediately under his eye. By proper attention and practice he will become so completely acquainted with the beard or beak of the type, as to know the meaning of the word he takes up, with the cursory view he may have of it, while in the act of lifting it. It is to this method that so many in the business are indebted for their expedition and cleanness in distribution; though to an observer the movement of their hands appear but slow. It is not to velocity of movement that expedition is to be gained, either in composing or distributing,—it is to *system*, without which their attempts may have the appearance of expedition, but produce only fatigue from anxiety and false motion. To system, therefore, I would particularly call their attention; and as clean distribution produces clean composition, which not only

saves time at the stone, but acquires them a respectable name, they cannot be too attentive to that part of their business. Another material point before distributing is the well-laying up of the form. In this particular many compositors are shamefully remiss, and from this negligence arise inconveniences which lose them more time than if they had first taken the necessary pains, besides the unpleasantness of working with dirty letter.

The letter-board should always be kept clean, and the bottom as well as the face of the form well washed before it is laid on the board and unlocked, for if any of the dirt remain from the lie brush after it is unlocked, it will sink into instead of run off the matter. This precaution taken, the pages should be well opened, and the whole form washed till the water appears to run from it in a clean state. A form cannot be well laid up without a plentiful supply of water. If the form appear particularly dirty, it will be better to lock it up again, and drive out the filth; then rinse the bottom and begin as before. The letter, once washed perfectly clean, may with little care and attention be kept so. Some compositors make use of alum, on which they rub their fingers, for the purpose of contracting the grain of the skin: this clearly proves the want of cleanliness, for if the letter were kept free from dirt, it would not become slippery.

It is frequently necessary after distribution, to dry the letter by the fire; in this case the compositor should be extremely cautious not to use it till it be perfectly cold, as very pernicious effects arise from the antimony which the heat of the fire brings into action when applied to the tender particles of the skin. It is always better, when it can be so managed, to distribute the letter at night, or before meals, that it may dry gradually.

When the copy of a work is put into the hands of a compositor, he should receive directions respecting the width and length of the page; whether it is to be leaded, and with white lines between the breaks; and whether any particular method is to be followed in the punctuation and in the adoption of capitals. These instructions being given, the compositor will make his measure to the number of pica m's directed, he then fits a setting rule to the measure, and his case being supplied with letter, he is prepared for composing.

If the copy he has been furnished with be a re-print, he will observe whether there be any difference between the type he is about to use and his copy, that the spacing may not be affected, against which he must take the necessary precautions at the time by widening or lessening the measure, if solid matter, or driving out or getting in each paragraph, if leaded. He should select a close-spaced line from the copy, which will at once prove if there be any variation. It is necessary to observe that all measures are made to pica m's, though the work may be printed in a different size type; and that all leads, &c., are cast to those m's, which standard being abided by, leads can always be had for any size page, without the expense of casting, or the trouble of cutting. Having taken notice of the state of the copy, and received proper directions, the compositor begins work; and here his attention is particularly called to those rules by which he may compose with accuracy, ease and expedition.

Many compositors use an article called a *jigger*, which by the simple contrivance of a slip of lead, a cord, and a counterbalancing weight, serves for the purpose of marking the exact part of the copy, and is removed every few lines. In France and Germany they have a different method for this purpose; it is a piece of steel, or iron, in which the copy is placed, and having a sharp point at the extremity, is stuck to the bars of the lower case.

When the composing stick is filled with a sufficient number of lines, which takes perhaps from ten to fifteen, great care is necessary in emptying the matter upon the galley, which is done by the compositor fixing the fore-finger of each hand in front of the rule; he then presses the middle fingers against the sides of the lines, and his thumbs behind the first line, raising the whole out of the composing stick at once, disengaging the thumbs as he places the lines against the head of the galley, or against the lines which have been previously emptied and placed thereon.

A proper gauge should be made exactly the depth of the page: this is done with a piece of reglet, marking the length with a penknife; and should the matter consist of verses, it will be well to make a mark at the bottom line of each verse, by that means the compositor will be enabled to make up his work with greater certainty and with less trouble.

Direction words at the bottom of the page are now discarded; nevertheless, in making up the page, it is necessary to substitute a white line for the signature, volume, &c. Also, in twelves and eighteens, two white lines should be added to the page, one for the signature, and the other in case of outs or additions from the author; but it should be observed, that the extra white line must be allowed in the gauge of the furniture, and not cast up in the price of the page.

The displaying of titles with neatness is one of the greatest efforts of the compositor; they require not only fancy and ingenuity, but great taste; no fixed rules, however, can be laid down for this purpose; all must depend upon observation and practice. Smith's observations upon title-pages being so apposite upon the subject, are given to the reader:—"For as to the title, it is a summary relation of the mean subject on which the work is founded; and though it consists but of one single page, yet to display its several members in such a manner that the whole may appear of an agreeable proportion and symmetry, is counted a masterly performance. And though setting of titles is generally governed by fancy, yet does it not follow that the excursions of every fancy should be tolerated, else too many titles would be taken to belong to chapmen's books. It is therefore proper that titles should have the revisal of one that is allowed to have a good judgment in gracing one. But to change and alter a title to the mere fancy of pretenders, is the ready way to spoil it. When, therefore, we go about a title, we consider as well the quantity as quality of our matter, that we may set out accordingly, and either branch our matter out to the best advantage, or else crowd it together by way of summaries; but which can not produce a handsome title. But where the matter for a title is so contrived that it may be divided, now into emphatical lines, and then into short summary articles, it is a compositor's fault if his title makes no proper appearance."

The title, preface, &c., of a volume are sometimes left till the body of the work is finished, as many circumstances may alter the author's original preface, date, &c., or the work may conclude in such a manner as to admit of their being brought in at the end, in a complete sheet, half-sheet, &c., which save both paper and press-work. For this reason it is then customary to begin the first sheet of a work with the signature B, leaving A for the title sheet. Signatures are generally set in small capitals; and where they run through the alphabet, the best method is to begin the second alphabet with 2 A, 2 B, and so on. The signature should be placed on the right hand corner of the page, and the number of the volume on the left. To a sheet of octavo, two signatures are all that

are necessary, which are placed to the first and third pages; to a sheet of twelves, three signatures, which are placed to the first, third, and ninth pages, in the following manner: B, B 2, B 3. In magazines, and works of that nature, printed in half sheets, figures of a bold face are sometimes put instead of letters, for signatures.

When running titles are used, they are generally put in the small capitals of the same body as the work. A full line, as a running title, has a clumsy appearance, and should be avoided, if possible. To a solid page, two leads make the usual white after the head; to a single leaded page, three leads, or a long primer white; and to a double leaded page, a pica white.

It is a bad practice, and rather too prevalent, to drive out a word at the close of a paragraph, or even to divide it, in order to reap the advantage of a break line. Part of a word, or a complete word in a break line, if it contain no more than three or four letters, is improper. It should be the business of the corrector, at all times, to notice this encroachment. The last line of a paragraph should not on any account begin a page, if the work has white lines between the breaks. To obviate which, the compositor may make his page either a line short or long, as most convenient, taking care that the page which backs it corresponds, so that it may not have the appearance of differing from its proper length.

If the work is very open, consisting of heads, whites, &c., the compositor must be particularly attentive to their depth, so that though the white may be composed of different sized quadrats, yet that their ultimate depth shall be equal to the regular body of the type the work is done in; for unless care is taken in this particular, the register must be incomplete. The pressman cannot make the lines back if the compositor is not careful in making up his matter.

The first line of a new paragraph is indented according to the width of the page, but never less than an m quadrat of whatever size the letter of the work may be. Authors vary materially in the mode of making paragraphs: some carry the argument of a position to a great length before they relieve the attention of the reader; while others break off almost at every place that will admit of a full point. In this case the author's plan is generally followed, unless, upon particular occasions, it may be necessary to multiply or reduce the number of breaks in the copy, if it can be done with propriety, in order to make the work look uniform.

After the body of a volume is completed, the contents and index are composed; the one placed at the beginning and the other at the end of the volume. They are both generally set in letter two sizes less than that of the work, and begun upon the right hand page. Running titles may be set to an index; but folios are seldom put, unless with a view to recommend the book for its extraordinary number of pages; for as an index does not refer to its own matter by figures, they are needless in this case. The signatures, however, are always carried on regularly to the last whole or half sheet of the work.

Where figures are in regular succession, a comma is put after each folio; and where their order breaks off, a full point is used. Thus, for example, after 5, 6, 7, 8, commas are put; and after 12. 16. 19. 24. full points; but to save figures and commas, the succession of the former is noticed, by putting a rule betwixt the first and last figures, thus: 5—8. A full point is not put after the last figures, because it is thought that their

standing at the end of a line is a sufficient stop. Neither is a comma or a full point placed to the last word of an article, in a wide measure and open matter; but it is not improper to use a comma at the end of every article in narrow columns, or where figures are put after the matter, instead of running them to the end of the line.

When the volume is completed, the consideration is what number of pages is left for the last sheet or half sheet of the work; then what number of pages the title, preface, contents, &c., will make, and whether they can be imposed so as to save paper and press-work. The preface may be drove out or got in; or if matter is wanted, a bastard, or half title may be set.

The dedication generally follows the title, and seldom exceeds one page. It should be set in capitals and small capitals, displayed in the manner of a title; but where it extends to a considerable length, it is generally set in a letter two sizes larger than the work. There is neither folio nor direction line required to it, where it does not exceed a page; but if it happens to be the third page of the sheet, the signature must be inserted.

Formerly, the preface was uniformly set in italic; at present, this plan is seldom adopted, and roman is used in its stead, of one size larger than the body of the work; at the same time the folios are put in numeral letters, beginning with ii over the second page, and continue the rest in the same manner. If the work itself was printed with folios only, then the preface should have them also in the middle of the line.

The title, dedication, preface, introduction, &c., form what is called the title sheet, viz., signature A, which makes the booksellers' alphabet (consisting of twenty-three letters) complete, provided that the body of the work begins with B. To ascertain more readily how many sheets a book consists of, more than are marked with signatures in capitals or small capitals, a lower case roman a is put to the first sheet after the title sheet, and thus carried on till the beginning of the body of the work.

The contents follow the preface or introduction, and are either set in roman or italic, and two sizes smaller than the body of the work; the first line of each summary full, and the rest indented an m quadrat, with the referring figures justified at the ends of the respective lines.

Smith's opinion of the *errata* is so applicable to the purpose, that it is here given at length. He says,—“What still remains to be taken notice of are the *errata's*, which sometimes are put immediately before the body of the work, and at other times after the *finis* of it. Sometimes they are put by themselves on the even side of a leaf, so as to face the title. But though this is very seldom done, it is a pity that it should ever have come into the thoughts of any one to do it at all; for it is a maxim to bring errata's into as narrow a compass as we conveniently can, and to put them in a place where they can make no great shew; since it is not to the credit of a book, to find a catalogue of its faults annexed. It is therefore wrong policy in those who make errata's appear numerous and parading, in hopes of being thought very careful and accurate; when they only serve to witness an author's inattention at a time when he should have been of the opposite inclination. But the subterfuges that are used by writers upon this occasion, are commonly levelled at the printer, to make him the author of all that is amiss; whereas they ought to ascribe it to themselves: for, were gentlemen to send in their copy fairly written, and well corrected

and prepared for the press, they would have no occasion to apprehend that their work would be neglected, were they to leave the whole management thereof to the printer, especially when it is written in his native language. But bad copy, not revised at all by the author, is one obstacle; and altering and changing the matter after it has been composed, is another means that obstructs the correctness of a work, not to mention the several accidents to which it is exposed before it has passed through the hands of a pressman. It would therefore be generous in gentlemen to examine the circumstances that may have occasioned an error, before they pronounce it a typographical one: for whoever has any ideas of printing, must consequently know that it is impossible to practise that art without committing errors; and that it is the province of an author to rectify them. For these several reasons it will appear how material it is not to make an erratum of every trifling fault, where the sense of a word cannot be construed to mean any thing else than what it was designed for; much less to correct the punctuation, unless where it should pervert the sense."

The method of tying up a page is done with a piece of fine packthread, turned four or five times round it, and fastened at the right hand corner, by thrusting a noose of it between the several turnings and the matter, with the setting rule, and drawing it perfectly tight, taking care, during the whole time, to keep the fore-finger of the left hand tight on the corner, to prevent the page from being drawn aside when the cord is strained. Care should be taken to see if the turns of cord lie about the middle of the shank of the letter; if they lie too high, as is generally the case, he thrusts them lower. The pages are then either placed upon pieces of paper, in security under the frame, or taken and placed upon the imposing stone in the place assigned them, in the order of imposition.

As doubts often arise in what cases to *double* the final consonant of verbs in the past tense and both participles; also the final consonant of irregular verbs in the active participle, a list of them is here given, which will be found of essential service to the learner, and he will do well to commit them to memory.

Abet, abetted
Abhor, abhorred
Abut, abutted
Acquit, acquitted
Admit, admitted
Allot, allotted
Amit, amitted
Annul, annulled
Appal, appalled
Apparel, apparelled
Avel, avelled
Aver, averred
Bag, bagged
Bam, bammed
Ban, banned
Bar, barred
Barrel, barrelled
Bed, bedded
Bedim, bedimmed
Bedrop, bedropped
Befal, befalling
Befit, befitted
Beg, begged
Beget, begetting
Begin, beginning
Berob, berobbed
Beset, besetting
Besmut, besmuted
Besot, besotted
Bespot, bespotted
Bestir, bestirred
Bestud, bestudded
Bet, betted

Bethral, bethralled
Betrim, betrimmed
Bias, biassed
Bib, bibbed
Bid, bidden
Blab, blabbed
Blot, blotted
Blur, blurred
Bob, bobbed
Bowel, bowelled
Brag, bragged
Brim, brimmed
Bud, budded
Cabal, caballed
Cancel, cancelled
Cap, capped
Capot, capotted
Carol, carolled
Channel, channelled
Chap, chapped
Char, charred
Chat, chatted
Chip, chipped
Chisel, chiselled
Chit, chitted
Chop, chopped
Clap, clapped
Clip, clipped
Clod, clodded
Clog, clogged
Clot, clotted
Club, clubbed

Cod, coddled
Cog, coggled
Commit, committed
Compel, compelled
Complot, complotted
Con, conned
Concur, concurred
Confer, conferred
Control, controlled
Coquet, coquetted
Counsel, counselled
Cram, crammed
Crib, cribbed
Crop, cropped
Crum, crummed
Cub, cubbed
Cudgel, cudgelled
Cup, cupped
Cut, cutting
Dab, dabbed
Dag, dagged
Dam, dammed
Dap, dapped
Debar, debarred
Debel, debelled
Defer, deferred
Demit, demitted
Demur, demurred
Deter, deterred
Dig, digged
Dim, dimmed
Din, dinned
Dip, dipped

Disannul, disannulled
Discounsel, discounselled
Disenthral, disenthralled
Dishevel, dishevelled
Disinter, disinterred
Dispel, dispelled
Distil, distilled
Dog, dogged
Don, donned
Dot, dotted
Drag, dragged
Dram, drammed
Drib, dribbed
Drip, dripped
Drivel, drivelled
Drop, dropped
Drub, drubbed
Drug, drugged
Drum, drummed
Dub, dubbed
Duel, duelled
Dun, dunned
Embar, embarred
Embowel, embowelled
Emit, emitted
Empanel, empannelled
Enamel, enamelled
Englut, englutted
Enrol, enrolled
Entrap, entrapped
Equal, equalled
Equip, equipped
Escot, escotted

Excel, excelled
 Extil, extilled
 Extol, extolled
 Fag, fagged
 Fan, fanned
 Fat, fatted
 Fib, fibbed
 Fig, figged
 Fin, finned
 Fit, fitted
 Flag, flagged
 Flam, flammed
 Flap, flapped
 Flat, flatted
 Flit, flitted
 Flog, flogged
 Flop, flopped
 Fob, fobbed
 Forbid, forbidding
 Forerun, forerunning
 Forestal, forestalled
 Foretell, foretelling
 Forget, forgetting
 Fret, fretted
 Fub, fubbed
 Fulfil, fulfilled
 Fur, furred
 Gab, gabbed
 Gad, gadded
 Gag, gagged
 Gambol, gambolled
 Gem, gemmed
 Get, getting
 Gip, gipped
 Glad, gladded
 Glib, glibbed
 Glut, glutted
 Guar, guarred
 God, godded
 Gospel, gospelled
 Gravel, gravelled
 Grin, grinned
 Grovel, grovelled
 Grub, grubbed
 Gum, gummed
 Gut, gutted
 Hag, hagged
 Handsel, handselled
 Hap, happed
 Hatchel, hatchelled
 Hem, hemmed
 Hip, hipped
 Hit, hitting
 Hitchel, hitchelled
 Hop, hopped
 Hovel, hovelled
 Housel, houselled
 Hug, hugged
 Hum, hummed
 Hyp, hypped
 Jam, jammed
 Japan, japanned
 Jar, jarred
 Jet, jetted
 Jig, jigged
 Immit, immitted
 Impel, impelled
 Inclip, inclipped
 Incur, incurred
 Infer, inferred
 Inship, inshipped
 Instal, installed
 Instil, instilled
 Instop, instopped
 Inter, interred
 Intermit, intermitted
 Intrhal, intrhalled
 Intromit, intromitted
 Inwrap, inwrapped
 Job, jobbed
 Jog, jogged
 Jug, jugged
 Jut, jutted
 Ken, kenned
 Kennel, kennelled
 Kernel, kernelled
 Kid, kidded
 Kidnap, kidnapped
 Knab, knabbed
 Knit, knitting

Knot, knotted
 Knub, knubbed
 Lag, lagged
 Landdam, landdammed
 Lap, lapped
 Let, letting
 Level, levelled
 Libel, libelled
 Lig, ligged
 Lip, lipped
 Lob, lobbed
 Lop, lopped
 Lug, lugged
 Mad, madded
 Man, manned
 Manumit, manumitted
 Map, mapped
 Mar, marred
 Marshal, marshalled
 Marvel, marvelled
 Mat, matted
 Miscal, miscalled
 Misinfer, misinferred
 Mistel, mistelling
 Mob, mobbed
 Model, modelled
 Mop, mopped
 Mud, mudded
 Nab, nabbed
 Nap, napped
 Net, netted
 Newmodel, newmodelled
 Nib, nibbed
 Nim, nimmed
 Nip, nipped
 Nod, nodded
 Nousel, nouselled
 Nut, nutted
 Occur, occurred
 Omit, omitted
 Onset, onsetting
 Overbid, overbidding
 Overget, overgetting
 Overred, overredded
 Overrun, overrunning
 Overset, oversetting
 Overskip, overskipped
 Overslip, overslipped
 Overtop, overtopped
 Overtrip, overtripped
 Outbid, outbidding
 Outrun, outrunning
 Outsit, outsitting
 Outstrip, outstripped
 Outwit, outwitted
 Pad, padded
 Pan, panned
 Parcel, parcelled
 Pat, patted
 Patrol, patrolled
 Peg, pegged
 Pen, penning
 Permit, permitted
 Pig, pigged
 Pin, pinned
 Pip, piped
 Pistol, pistolled
 Pit, pitted
 Plan, planned
 Plat, platted
 Plod, plodded
 Plot, plotted
 Plug, plugged
 Pod, podded
 Pommel, pommelled
 Pop, popped
 Postil, postilled
 Pot, potted
 Prefer, preferred
 Pretermite, pretermitted
 Prig, prigged
 Prim, primmed
 Prog, progged
 Prop, propped
 Propel, propelled
 Pulvil, pulvilled
 Pun, punned
 Pup, pupped
 Put, putting
 Quarrel, quarrelled

Quip, quipped
 Quit, quitting
 Quob, quobbed
 Ram, rammed
 Rap, rapped
 Ravel, ravelled
 Readmit, readmitted
 Rebel, rebelled
 Recal, recalled
 Recommit, recommitted
 Recur, recurred
 Refel, refelled
 Refer, referred
 Refit, refitted
 Regret, regretted
 Reinstal, reinstalled
 Remit, remitted
 Repel, repelled
 Restem, restemmed
 Revel, revelled
 Revictual, revictualled
 Rid, ridding
 Rig, rigged
 Rip, ripped
 Rival, rivalled
 Rivel, rivelled
 Rivet, rivetted
 Rob, robbed
 Rot, rotting
 Rowel, rowelled
 Rub, rubbed
 Run, running
 Rut, rutted
 Sag, sagged
 Sap, sapped
 Scab, scabbed
 Scan, scanned
 Scar, scarred
 Scrub, scrubbed
 Scud, scudded
 Scum, scummed
 Set, setting
 Sham, shammed
 Shed, shedding
 Ship, shipped
 Shog, shogged
 Shovel, shovelled
 Shred, shredding
 Shrivel, shrivelled
 Shrub, shrubbed
 Shrug, shrugged
 Shun, shunned
 Shut, shutting
 Sin, sinned
 Sip, sipped
 Sit, sitting
 Skim, skimmed
 Skin, skinned
 Skip, skipped
 Slam, slammed
 Slap, slapped
 Slip, slipped
 Slit, slitting
 Slop, slopped
 Slot, slotted
 Slur, slurred
 Smut, smutted
 Snap, snapped
 Snip, snipped
 Snivel, snivelled
 Snub, snubbed
 Snug, snugged
 Sob, sobbed
 Sop, sopped
 Sot, sottd
 Span, spanned
 Spar, sparred
 Spet, spetted
 Spin, spinning
 Spit, spitting
 Split, splitting
 Spot, spotted
 Sprig, sprigged
 Spur, spurred
 Squab, squabbed
 Squat, squatted
 Stab, stabbed
 Star, starred
 Stem, stemmed
 Step, stepped

Stir, stirred
 Stop, stopped
 Strap, strapped
 Strip, stripped
 Strut, struted
 Stub, stubbed
 Stud, studded
 Stum, stummed
 Stun, stunned
 Stut, stutted
 Submit, submitted
 Sum, summed
 Sun, sunned
 Sup, supped
 Swab, swabbed
 Swag, swagged
 Swap, swapped
 Swig, swigged
 Swim, swimming
 Swop, swopped
 Tag, tagged
 Tan, tanned
 Tap, tapped
 Tar, tarred
 Ted, tedded
 Thin, thinned
 Thrid, thriddled
 Throb, throbbled
 Thrum, thrummed
 Tin, tinned
 Tinsel, tinselled
 Tip, tipped
 Top, topped
 Trammel, trammelled
 Transcur, transcurred
 Transfer, transferred
 Transmit, transmitted
 Trap, trapped
 Travel, travelled
 Trepan, trepanned
 Trig, trigged
 Trim, trimmed
 Trip, tripped
 Trot, trotted
 Tag, tagged
 Tun, tunned
 Tunnel, tunnelled
 Tup, tupped
 Twin, twinned
 Twit, twitted
 Victual, victualled
 Unbar, unbarred
 Unbed, unbedded
 Unbias, unbiassed
 Unbowel, unbowelled
 Unclog, unclogged
 Undam, undammed
 Underbid, underbidding
 Underpin, underpinned
 Underprop, underpropped
 Underset, undersetting
 Unfit, unfitted
 Ungod, ungoddied
 Unkennel, unkennelled
 Unknit, unknitting
 Unknot, unknotted
 Unman, unmanned
 Unpeg, unpegged
 Unpin, unpinned
 Unravel, unravelled
 Unrig, unrigged
 Unrip, unripped
 Unrivet, unrivettied
 Unroll, unrolled
 Unship, unshipped
 Unstop, unstopped
 Unwit, unwitted
 Wad, wadded
 Wag, wagged
 War, warred
 Wed, wedded
 Wet, wetting
 Whet, whetted
 Whip, whipped
 Whiz, whizzing
 Win, winning
 Wit, witting
 Worship, worshipped
 Wot, wotted
 Wrap, wrapped

The aspirate **H** is another essential point, not only to the reader but to the printer. At the beginning of words it is always sounded, except in *heir, heiress, honest, honesty, honour, honourable, herb, herbage, hospital, hostler, hour, humble, humour, humorous, and humorsome*. The indefinite article *an* is used before words beginning with **H** sounded, when the accent is on the second syllable, as, *an heroic action, an historical account*. The article *a*, instead of *an*, is now used before words beginning with *u* long; and *an* always before those that begin with *u* short; as *a union, a university, a useful book; an usher, an umbrella*.

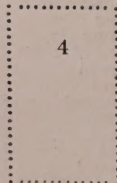
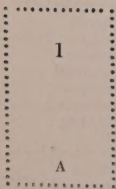
In concluding this portion of the work, I would most earnestly impress upon the learner that all the instruction which can be laid down for his guidance will be useless and of no avail, if he bring not his mind to the task—that he is desirous of obtaining a perfect knowledge of his profession, upon which his future prospects in life so much depend. To the more experienced printer I would briefly say, that it is hoped some things here inserted will be found useful to him in the course of his practice, with which he cannot at all times charge his memory. My object is to make this a useful, rather than an expensive book to the professors of typography.

ON IMPOSING.

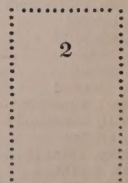
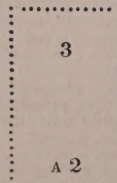
HAVING sufficiently treated upon the principal subjects connected with the department of composing, it necessarily follows to lay before the learner schemes of the various impositions, and to explain, in as clear a manner as possible, every point connected with this important branch of the art. Imposing not only comprehends the knowledge of the pages that they may, after they are printed off, follow each other regularly, but also the manner of dressing the furniture, and making the proper margin. When as many pages are composed as are required for a whole sheet, half sheet, or such portions of a sheet, of whatever size, the compositor prepares the stone for their reception, by removing any dirt or other obstruction: he begins to carry the pages from under his frame, and lay them upon the imposing stone, taking particular care to place the first page in its right position, with the signature to the left hand facing him, according to the following schemes, which will be found to contain every necessary imposition. They consist of folios, quartos, octavos, twelves, sixteens, eighteens, twenties, twenty-fours, thirty-twos, thirty-sixes, forties, forty-eights, sixty-fours, seventy-twos, ninety-sixes, and one hundred and twenty-eights.

A SHEET IN FOLIO.

Outer Form.

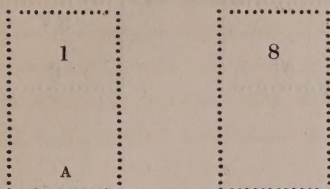


Inner Form.

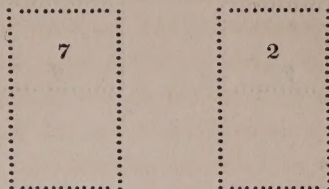


TWO SHEETS IN FOLIO, QUIRED, OR PLACED ONE IN ANOTHER.

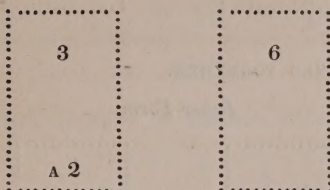
Outer Form of the Outer Sheet.



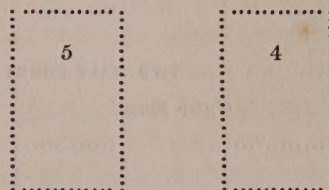
Inner Form of the Outer Sheet.



Outer Form of the Inner Sheet.



Inner Form of the Inner Sheet.



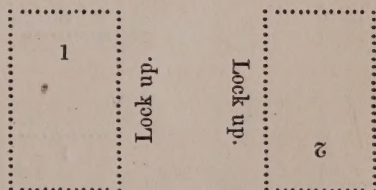
Imposing in quires may be carried on to any extent, by observing the following rule:—First, ascertain the number of pages, then divide them into so many sheets of folio, and commence laying down the two first and two last, which form the first sheet, and so on to the centre one, always remembering that the odd pages stand on the left, and the even on the right; the folios of each two forming one more than the number of pages in the work: for example, let us suppose the work to consist of thirty-six pages, which is nine sheets of folio, then they should be laid down according to the following scheme:—

<i>Outer.</i>	<i>Inner. Sheet.</i>	<i>Outer.</i>	<i>Inner. Sheet.</i>	<i>Outer.</i>	<i>Inner. Sheet.</i>
1—36.....	35—2, first,	3—34.....	33—4, second,	5—32.....	31—6, third,
7—30.....	29—8, fourth,	9—28.....	27—10, fifth,	11—26.....	25—12, sixth,
13—24.....	23—14, seventh,	15—22.....	21—16, eighth,	17—20.....	19—18, ninth.

The furniture must be reduced in the backs of the inner sheets, to allow for stitching.

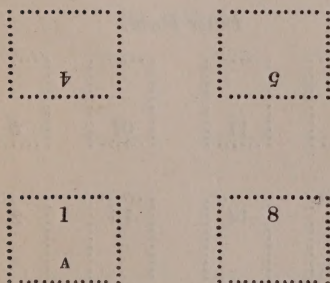
THE MODE OF IMPOSING ABSTRACTS OF TITLE DEEDS.

These are printed with blanks at the backs, with all the margin on the left side, and on single leaves, being stitched at the corner. The following is the method of imposing the form to save press-work, as well as the charge of the compositor.

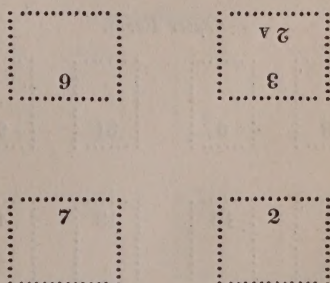


A SHEET OF COMMON QUARTO.

Outer Form.

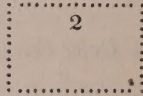
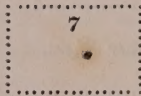
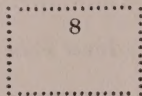
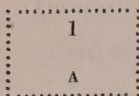
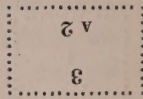
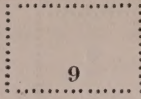
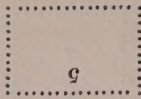
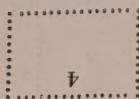


Inner Form.

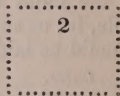
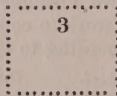
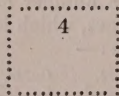
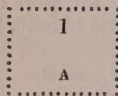
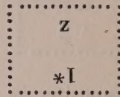
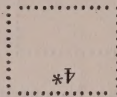
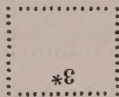
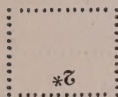


PRINTERS' MANUAL.

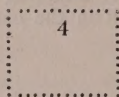
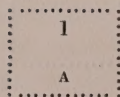
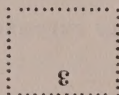
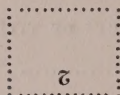
A SHEET IN BROAD QUARTO.

*Outer Form.**Inner Form.*

TWO HALF SHEETS IN QUARTO, WORKED TOGETHER.

*Outer Form.**Inner Form.*

HALF A SHEET OF COMMON QUARTO.



A SHEET OF COMMON OCTAVO.

*Outer Form.**Inner Form.*

A SHEET OF BROAD OCTAVO.

Outer Form.

Inner Form.

13	12	6	16
4	5 3 A	8	1 1 A

9	10	11	14
2	7 4 A	6	3 2 A

HALF A SHEET OF COMMON OCTAVO.

TWO QUARTERS OF A COMMON OCTAVO.

4	5	6	3
1 A	8	7	2

2	3	4	B 1
1 A	4	3	2

TWO HALF SHEETS OF COMMON OCTAVO WORKED TOGETHER.

Outer Form.

Inner Form.

4	5	8	B 1
1 A	8	5	4

2	7	6	A 2 3
3 B 2	6	7	2

SHEET OF OCTAVO WITH TWO SIGNATURES, 12 OF THE WORK, AND 4 OF OTHER MATTER.

Outer Form.

Inner Form.

2	3	8	A 3 5
1 A	12	9	4

6	7	4	Z 1
3 A 2	10	11	2

A SHEET IN OCTAVO, OF HEBREW WORK.

*Outer Form.**Inner Form.*

8 5	21	6	8	7 2	10	11	9
4	13	16	1 88	2	15	14	3 28

A SHEET OF TWELVES.

*Outer Form.**Inner Form.*

21	81	91	9 v 6	01	91	41	11
8	17	20	5	9	19	18	7
1 A	24	21	4	3 A 3	22	23	2

A SHEET OF TWELVES, WITHOUT CUTTING.

*Outer Form.**Inner Form.*

5 A 3	20	17	8	7	18	19	6
4	21	16	9	10	15	22	2 v 3
1 A	24	13	12	11	14	23	2

ONE-THIRD, OR EIGHT PAGES OF A SHEET OF TWELVES.

To be imposed as a Slip, or in the Off-cross.

Outer Form.

Inner Form.

1	8	5	4	3	6	7	2
A				A 2			

A SHEET OF LONG TWELVES.

Outer Form.

Inner Form.

A 1	4	A 2	3	2
16	13	14	15	
9	12	11	10	
8	5 A 3	6	7 A 4	
17	20	19	18	
24	16	22	23	

HALF SHEET OF TWELVES WITHOUT CUTTING.

A COMMON HALF SHEET OF TWELVES.

5	8	7	6	6	7	8	A 8
4	9	10	3	4	9	10	A 2
1	12	11	2	1	12	11	2
A				A			

HALF SHEET OF TWELVES WITH TWO SIGNATURES, BEING EIGHT CONCLUDING PAGES OF A WORK, AND FOUR OF OTHER MATTER.

2	3	4	z 1
4	5	6	a 2 3
1 A	8	7	2

A SHEET IN TWELVES, WITH TWO SIGNATURES.

Outer Form.

Inner Form.

20	21	24	B 17	18	23	22	a 2 19
8	9	12	a 3 5	6	11	10	7
1 A	16	13	4	3 A 2	14	15	2

TWO HALF SHEETS OF TWELVES WORKED TOGETHER.

Outer Form.

Inner Form.

6	7	6	7	8	z 3 5	8	a 3 5
4	9	4	9	10	a 2 3	10	a 2 3
1 A	12	1	12	11	2	11	2

A SHEET IN SIXTEENS,* WITH ONE SIGNATURE.

Outer Form.

Inner Form.

4	29	28	3 ^A 5	6	27	30	2 ^A 3
13	20	12	12	11	22	19	14
91	17	24	9	10	23	18	15
1 A	32	25	8	7	26	31	2

A HALF SHEET IN SIXTEENS.

2	15	14	2 ^A 3
7	10	11	6
8	9	12	5
1 A	16	13	4

A SHEET OF EIGHTEENS WITH ONE SIGNATURE.

Outer Form.

Inner Form.

10	27	26	9 ^A 11	20	17	18	19	12	25	28	9 ^A 9
8	29	32	3 ^A 5	22	15	16	21	6	31	30	7 ^A 7
1 A	36	33	4	23	14	13	24	3	34	35	2

* A sheet in sixteens, with two signatures, is imposed as two sheets of common 8vo., putting the first signature for the one half sheet where A stands above, and the 1st page of the other half sheet in the place of A 3, folio 5.

A SHEET OF EIGHTEENS, WITH TWO SIGNATURES.

*Outer Form.**Inner Form.*

8	8H	4	8H	12	1	2	11	10	8H	9	7
8	11	10	8V	9	8V	10	11	9	6	8	7
1	24	21	4	13	12	11	14	3	22	23	2
A								A 2			

A SHEET OF EIGHTEENS, WITH THREE SIGNATURES, AS THREE HALF SHEETS OF TWELVES.

*Outer Form.**Inner Form.*

1	12	9	4	5	8	7	6	3	10	11	2
C				C 3		C 4		C 2			
1	12	9	4	5	8	7	6	3	10	11	2
B				B 3		B 4		B 2			
1	12	9	4	5	8	7	6	3	10	11	2
A				A 3		A 4		A 2			

A SHEET OF EIGHTEENS, TO BE FOLDED UP TOGETHER.

*Outer Form.**Inner Form.*

5	32	29	8	17	20	19	18	7	30	31	6
A 3								A 4			
4	33	28	8V	16	21	22	15	10	27	34	3
1	36	25	12	13	24	23	14	11	26	35	2
A								A 7			

A SHEET OF EIGHTEENS, AS A SHEET OF TWELVES AND A HALF SHEET OF TWELVES.

*Outer Form.**Inner Form.*

12	13	16	8V	9	7	8	5	10	11	14	11
8	17	20	5	4	6	10	3	9	11	18	7
1	24	21	4	1	12	11	2	3	22	23	2
A				Z				A 2			

A HALF SHEET OF EIGHTEENS.

14	8 v	10	9 v	9	13
4	15	12	4 v	7	16
1	18	11	8	17	2
A					

The white paper of this form being worked off, the four lowermost pages in the middle must be transposed; viz. pages 8, 11, in the room of 7, 12, and pages 7, 12, in the room of 8, 11.

A HALF SHEET OF EIGHTEENS, WITHOUT
TRANSPOSING THE PAGES.

9	7	18	c	8	8 v
4	9	16	17	10	3
1	12	13	14	11	2
A		B			

SIXTEEN PAGES TO A HALF SHEET OF EIGHTEENS.

12	8 v		6	11	
4	13	8	9 v	14	2 v
1	16	7	10	15	2
A		4 v			

The white paper of this half sheet being worked off, the middlemost pages must be transposed; viz., pages 7, 10, in the places of 8, 9, and pages 8, 9, in the places of 7, 10.

A SHEET OF TWENTIES.

Outer Form.

20	12	24	17
5	36	33	8
A 3			
16	25	28	13 v
9	32	29	12
A 5			
1	40	37	4
A			

Inner Form.

18	23	22	19
7	34	35	9
A 4			
14	27	26	15 v
11	30	31	10
A 6			
3	38	39	2
A 2			

PRINTERS' MANUAL.

A SHEET OF TWENTY-FOURS WITH TWO SIGNATURES.

*Outer Form.**Inner Form.*

21	31	61	9 A 6	96	73	40	33	9 B 43	63	83	9 B 53	01	51	41	9 A 11
8	17	20	3 A 9	32	14	44	3 B 22	03	34	24	4 B 13	9	61	81	4 A 7
1 A	24	21	4	25 B	48	45	28	27 B 2	46	47	26	3 A 2	22	23	2

A COMMON HALF SHEET OF TWENTY-FOURS.

12	13	91	9 v 6	01	91	41	9 v 11
8	17	20	8 v 9	9	61	18	4 v 7
1 A	24	21	4	3 A 2	22	23	2

A HALF SHEET OF TWENTY-FOURS, THE SIXTEENS WAY.

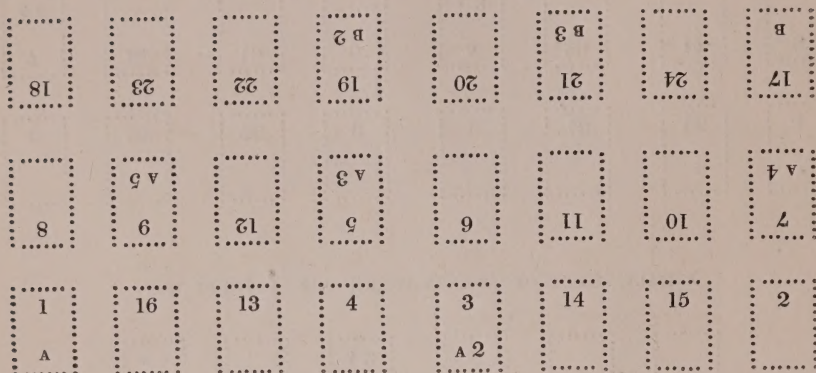
			2 v 8		9 v 6
7	18	19	6	13	12
A 4					
8	17	20	8 v 9	14	9 v 11
1	24	21	4	15	10
A					

A QUARTER SHEET OF TWENTY-FOURS.

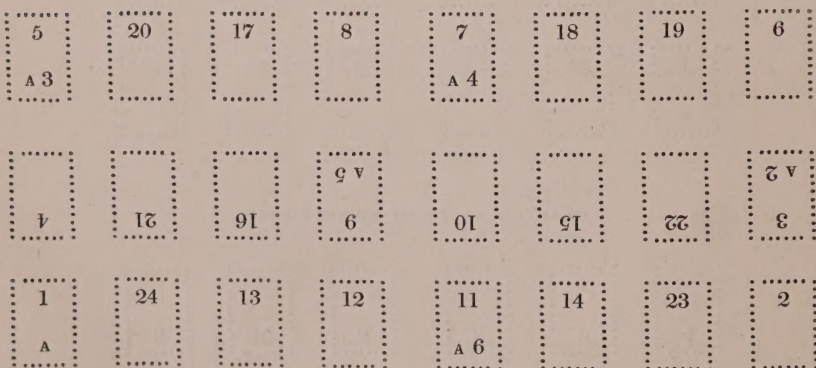
4	6	8	2 z 9	10	3
1	12	7	6	11	2
z					

The white paper of this quarter sheet being worked off, the middlemost pages must be transposed, viz. pages 5, 7, to the places of 6, 8, and pages 6, 8, in the places of 5, 7.

A HALF SHEET OF TWENTY-FOURS, WITH TWO SIGNATURES.



A HALF SHEET OF TWENTY-FOURS, WITHOUT CUTTING.



A HALF SHEET OF LONG TWENTY-FOURS.

2	19	10	4 ^v 7	18	22
3 A 2	14	11	6	19	22
4	13	12	3 ^v 5	20	21
1 A	16	9 A 5	8	17	24

A HALF SHEET OF THIRTY-TWOS.

18	31	30	19	20	29	32	17
23	26	27	22	21	28	25	24
8	5 ^v 6	12	3 ^v 9	9	9 ^v 11	10	4 ^v 7
1 A	16	13 A 7	4	3 A 2	14	15 A 8	2

A SHEET OF THIRTY-TWOS.

Inner Form.

Outer Form.

2	69	78	18	92	68	89	4 V	8	25	07	52	28	38	49	V
15	50	47	18	23	42	55	10	9	56	41	24	17	48	49	16
A 8								A 5				A 9			
14	51	46	19	22	43	54	11	12	53	44	21	20	45	52	13
							A 6								A 7
3	62	35	30	27	38	59	6	5	60	37	28	29	36	61	4
A 2								A 3							

A SHEET OF THIRTY-TWOS, WITH FOUR SIGNATURES.

Outer Form.

Inner Form.

50	63	62	51	36	45	48	33	34	47	46	35	52	61	64	49	D
59	58	59	54	43	44	44	40	39	42	43	38	53	60	57	56	
4	4	4	4	3	2	2	4	C	4	4	3	D	3	3	3	
8	9	12	5	22	27	26	23	24	25	28	21	6	11	10	7	A
1	16	13	4	19	18	13	18	17	32	29	20	3	14	15	2	
A				B				B				A				

A HALF SHEET OF THIRTY-TWOS, WITH TWO SIGNATURES.

81	18	08	7 8 61	07	67	78	8 41
23 B 4	26	27	22	21 B 3	28	25	24
8	6	71	8 8 9	9	11	01	7 8 2
1 A	16	13	4	3 A 2	14	15	2

A COMMON HALF SHEET OF THIRTY-TWOS.

4	29	28	8 8 5	6	27	30	7 8 3
13 A 7	20	21	12	11 A 6	22	19	14
16	17	24	8 8 9	10	23	18	8 8 15
1 A	32	25	8	7 A 4	26	31	2

A HALF SHEET OF THIRTY-SIXES.

2	35	34	2	24	13
7	30	31	6	21	16
4					
9	28	25	12	19	18
5					
10	27	26	9	20	17
8	29	32	8	22	15
1	36	33	4	23	14
A					

A HALF SHEET OF THIRTY-SIXES, WITH TWO SIGNATURES.

2	23	22	2	16	9
7	18	19	9	13	12
4					
25	36	33	28	11	30
B					
26	35	34	27	32	29
8	17	20	8	14	11
1	24	12	4	15	10
A					

A HALF SHEET OF THIRTY-SIXES, WITHOUT CUTTING.

2	35	26	9 v 11	14	23
3 A 2	34	27	10	15	22
9	31	30	4 v 7	18	19
5 A 3	32	29	8	17	20
4	33	28	5 v 9	16	21
1 A	36	25	12	13	24

A HALF SHEET OF FORTIES.

20	21	24	17	18	23	22	19
5 A 3	36	33	8	7 A 4	34	35	6
16	25	28	7 v 13	14	27	26	8 v 15
9 A 5	32	29	12	11 A 6	30	31	10
1 A	40	37	4	3 A 2	38	39	2

A HALF SHEET OF FORTY-EIGHTS, WITH TWO SIGNATURES.

2	23	22	3 A 2	26	47	46	27 B 2
7 A 4	18	19	9	13 B 4	42	43	30
11 A 6	14	15	10	35 B 6	38	36	34
12	13	16	9 A 5	36	37	40	33 B 5
8	17	20	5 A 3	32	41	44	29 B 3
1 A	24	12	4	25 B	48	45	28

A QUARTER SHEET OF FORTY-EIGHTS, WITH TWO SIGNATURES.

18	23	22	19 Z 2	20	21	24	17 Z
8	9	12	5 A 3	6	11	10	7 A 4
1 A	16	13	4	3 A 2	14	15	2

A HALF SHEET OF FORTY-EIGHTS, WITH THREE SIGNATURES.

34	47	46	35 c 2	36	45	48	33
68	42	43	38	37 c 3	44	14	40
18	31	30	19 B 2	20	29	32	17 B
23	26	27	22	12 B 3	28	25	24
8	9	12	5 A 3	6	11	10	7
1 A	16	13	4	3 A 2	14	15	2

A QUARTER SHEET OF FORTY-EIGHTS, WITHOUT CUTTING.

5 A 3	20	17	8	7 A 4	18	19	6
4	21	16	9 A 5	10	15	22	3 A 2
1 A	24	13	12	11 A 6	14	23	2

A COMMON QUARTER SHEET OF SIXTY-FOURS.

4	29	28	3 a	9	27	30	2 a
13	20	21	12	11	22	19	14
				a 6			
16	17	24	5 a	10	23	18	15
1	32	25	8	7	26	31	2
a				a 4			

A QUARTER SHEET OF SIXTY-FOURS, TWENTY PAGES OF THE WORK, EIGHT OF TITLE, AND FOUR OF OTHER MATTER.

2*	7*	24	13	14	1	8*	1*
*3	*6	17	20	19	18	*5	*4
		B					
8	9	12	5 a	6	11	10	7 a
1	16	13	4	3	14	15	2
A				A 2			

A QUARTER SHEET OF SIXTY-FOURS.

18	31	30	19	20	29	32	17
23	26	27	22	21	28	25	24
8	5 a	12	3 a	6	11 a	10	7 a
1	16	13	4	3	14	15	2
a		a 7		a 2		a 8	

A HALF SHEET OF SIXTY-FOURS.

2	68	34	31	26	39	58	7 A 4
15	50	47	18	23	42	55	10
8 A							
14	51	46	19	22	43	54	11 A 6
3	29	35	08	27	38	59	9
2 A							
4	61	36	29	28	37	60	5 A 3
13	52	45	20	12	44	53	12
7 A							
16	49	48	17 A 9	24	41	56	9 A 5
1	49	33	32	25	04	57	8
A							

A COMMON QUARTER SHEET OF FORTY-EIGHTS.

12	13	16	9 A 5	10	15	14	11 A 6
8	17	20	5 A 3	6	19	18	7 A 4
1 A	24	12	4	3 A 2	22	23	2

A HALF SHEET OF SEVENTY-TWOS, WITH THREE SIGNATURES.

09	12	02	23	19	49	93	89	69	29	69	24	64
55	66	67	54	61	60	59	62	53	68	65	56	
C 4						C 6		C 3				
92	47	94	22	04	58	48	63	82	57	84	B	92
			2 B		5 B							
31	42	43	30	37	36	35	38	29	44	41	32	
B 4						B 6		B 3				
8	41	02	6 V	41	9 V	21	31	9	61	81	4 V	4
			5		11							
1	24	21	4	15	10	9	16	3	22	23	2	
A						A 5		A 2				

A HALF SHEET OF ONE HUNDRED AND TWENTY-EIGHTS.

2	91	41	2 v	02	62	23	41	81	13	03	2 B	4	31	91	v
7	10	11	6	21	28	25	24	23	26	27	22	5	12	9	8
A 4				B 3				B 4				A 3			
95	29	09	39	83	34	24	63	04	14	44	33	49	69	89	4 D
49	64	61	52	35	46	47	34	33	48	45	36	51	62	63	50
D				C 2				C				D 2			
22	32	92	33	98	16	06	28	88	68	26	33	02	52	42	12
65	80	77	68	83	94	95	82	81	96	93	84	67	78	79	66
E				F 2				F				E 2			
021	121	421	3 H	201	201	901	301	401	501	801	3 G	811	321	221	4 H
113	128	125	116	99	110	111	98	97	112	109	100	115	126	127	114
H				G 2				G				H 2			

Schemes of various other irregular sizes might have been introduced; but they could answer no other purpose than that of pleasing the fancy, by exhibiting the possibility of folding a sheet of paper into so many different forms.

In attempting to elucidate this subject, a few examples of some of the sizes, will be fully explanatory:—therefore, beginning with a half sheet of octavo: for instance, let us suppose that we have got four pages of prefatory and four of concluding matter, they should be imposed as two quarters of a sheet the long way—say eight of introductory and four of conclusion, these would form one half sheet and a quarter, as just noticed:—in twelves, half sheet, they should stand four and eight, or three fours (three off-cuts) if a sheet, say twenty and four, we place sixteen in the long crosses (as a sheet of octavo), and the remaining eight as two fours in the short crosses; viz. the first four would occupy the usual stations of pages 9, 10, 15, 16, and the other four would take the places assigned to 11, 12, 13, 14—if three eights, then as three off-cuts: in sixteens, half-sheet, say twelve and four, they will stand thus, one half sheet of twelves without cutting, the other four in the situations of 3, 2, 15, 14; if two eights, as two half sheets of octavo—a sheet, imagine twenty and twelve, the first sixteen should be laid down as two half sheets of octavo (opened), that is, the ninth page in the place of the third in the scheme; the other four will occupy the places of pages 25, 26, 7, 8; and the other twelve as a half sheet of twelves, without cutting, placing the first page in the situation of 27 in the scheme:—a half sheet of eighteens, say eight and ten, that is, eight would form a half sheet of octavo, the other two as 9 and 10; the remaining eight should run thus, the first four supplying the stations of 11, 12, 7, 8, and the other four the places of 13, 14, 5, and 6:—a sheet of eighteens, divide into sixteen, twelve, and eight; viz. the first should fill the situations of 1, 2, 3, 4, 5, 6, 7, 8, 29, 30, 31, 32, 33, 34, 35, 36, as a sheet of octavo; the second in the places of 23, 24, 21, 22, 19, 20, 17, 18, 15, 16, 13, 14, a common half sheet of twelves; the remaining eight instead of pages 9, 10, 11, 12, 25, 26, 27, 28, as two quarters of a sheet of octavo, perfected: thus far the explanation will perhaps be sufficient, because the rule for the twelves may be applied to the twenty-fours, and those of the octavo and sixteens to the thirty-twos, &c. All odd matter, for whatever sized form, should be divided into fours, eights, twelves, and sixteens, which is the ground-work of all the impositions, (except the eighteens, which differ from all the others); for instance, sixteens, twenty-fours, and thirty-twos, are only octavos and twelves doubled, or twice doubled, and imposed in half sheets: for example, the sixteens are two octavos imposed on one side the short cross; the twenty-fours are two twelves imposed on each side the long cross, and a thirty-twos is four octavos imposed in each quarter of the chase. Thus a sheet may be repeatedly doubled. By this division, any form or sheet may be imposed, always bearing in mind, that the first page of each class must stand to the left hand, when the foot of the page is towards you, and to the right when the head of the page is the nearest to you. Having set down the first page, then trace the remainder according to the scheme which applies to its number; in proof of which, the standard rule for all other impositions may be adopted; namely, each two pages that come together, will make one more than the number of pages in the class, or sheet. The first page of any portion can be placed in the situation of any odd page, where they make even numbers. These examples will, no doubt, prove satisfactory.

The learner would do well to attend very particularly to laying down the pages before the cords are removed; and as the foregoing directions, it is hoped, will be found to contain all that is requisite, I shall now proceed to dressing of chases, or to try whether the furniture is so proportioned as that each page may occupy one side of a leaf, so as to have an equal margin of white paper left at the sides as well as at the head and foot thereof.

The method of making margin by rule, is practised by no other printing nation besides the English: and it would be in vain to persuade printers and booksellers in foreign parts to come into our measures, as to making margin; since they would disoblige the literati were they to deprive them of a large margin, on which to make their remarks; and as to narrow gutter-sticks in school-books and other circulating works, they are so contrived for the joint interest of the printer and proprietor.

To make proper margin, some use the following method for octavos; viz. they measure and mark the width of four pages by compasses, on a sheet of paper designed for the work, beginning to measure at one extremity of the breadth of the sheet. The rest of the paper they divide into four equal parts, allowing two-fourths for the width of two separate gutter-sticks; the remaining two-fourths they divide again into four equal parts, and allow one-fourth for the margin along each side of the short cross, and one-fourth for the margin to each outside page. But because the thickness of the short cross adds considerably to the margin, they reduce the furniture in the back accordingly, and thereby enlarge the outside margin, which requires the greatest share, to allow for the unevenness of the paper itself as well as for pressmen laying sheets uneven, when the fault is not in the paper. Having thus made the margin between the pages to the breadth of the paper, they proportion the margin at the head, in the same manner, to the length, and accordingly measure and mark the length of two pages, dividing the rest into four parts, whereof is allowed one-fourth on each side of the long cross, and one-fourth for the margin that runs along the foot of the two ranges of pages. But though each part is counted equal to another, they do not prove so upon examination; for as in the short cross, so they lessen the furniture on both sides the long one, to enlarge the bottom margin, for the same reasons that were assigned for extending the side margin.

This being the method that is used by making margin in octavos, they go the same way to work in twelves, where their chief care is to fix upon a proper size for the head-sticks, or bolts; and, according to them, allow in the following manner; viz. for the outer margin along the foot of the pages, the amount of two-thirds of the breadth of the head-sticks, and the same for the inner margin, that reaches from the foot of the fifth page to the centre of the groove for the points; and from the centre of that groove to the pages of the quire, or that cut-off, they allow half the breadth of the head-stick. As to the margin along the long cross, it is governed by the gutter sticks; and it is common to put as much on each side of the long cross as amounts to half the breadth of the gutter-stick, without deducting almost any thing for the long cross, since that makes allowance to answer the outer margin—exposed to the mercy of the pressman and bookbinder.

Some compositors make margin in the following manner. Having dressed their chases with suitable furniture, for octavo, they fold a sheet of the right paper to that size; then, opening it to the size of a leaf in quarto, they lay one extremity of it against the folio side of the fifteenth page, if it be an inner, or against the folio side of the thirteenth

page, if it be an outer form, to observe whether the opposite extremity of the paper, folded in quarto, reaches to and fairly covers the third, or the first page, according to the form under hand; which, if it does, proves the margin of that quarter to be right, and that the others may be adjusted to that. Having in this manner made the margin to the breadth of the paper, they proportion it to the length, by trying whether the depth of the paper, folded in quarto, reaches to and fairly covers the bottom of the line of the fifteenth or of the thirteenth page, when the upper end of the paper, folded in quarto, is laid against the back of the running title of the tenth or of the twelfth page; which, if it does, proves that the margin to the length of the page is right. In making margin, always take care that the gutter-sticks be of a proper breadth, which may be tried by holding one end of the paper, folded in quarto, to the centre of the groove in the short cross, to observe whether the fold for octavo falls in the middle of a gutter-stick; if it should, it will prove the gutter to be correct. In this manner we may also try the margin of twelves and other sizes; for having carefully folded a sheet of the paper intended for the work, one quarter may be first dressed, and the margin adjusted before we proceed further; for if the foldings fall in the centre of the respective parts of the furniture, it proves that the margin is right throughout.

As the lessening or widening of gutter-sticks is sometimes unavoidable, and withal troublesome to compositors, it would be advisable to have them composed of two or more pieces, as they could readily be extended or reduced, according to circumstances, by means of reglets, so as to answer for different sizes of paper, which would not only be found advantageous to the compositor, but it would also greatly tend to assist the pressman in making his form to register.

The chases being now dressed, and the proper margin made, nothing remains but quoining and locking up the forms. But before this is done, we cut slips of scaleboards, and put one, or sometimes more, along both sides of the long as well as of the short cross; not on account of enlarging the margin, but to supply the inequality of one cross to another, and to assist the pressman in making register; for though we find some so very nice, as to fancy here a thin scaleboard too much, and there one too little, it amounts to no more than mere imagination, and, perhaps a show of authority; considering, that the very parts of the paper, the margin of which is adjusted by scaleboards, are subject to the bookbinder's plough, and that it is dubious whether he will have the same regard to margin with the printer; for we are induced to think, that the abolishing of large outside margin is owing to some penurious bookbinders, who give themselves more concern about white paper shavings, than the handsome appearance of a book; hence, to prevent books from being spoiled in this manner, it is usual in Germany to make the title-page considerably wider and longer than those of the work, which sometimes has a good effect.

All that has been said concerning making margin, relates properly to imposing the first sheet of a work; for after that is truly dressed, a second, or more sheets may be dressed with less trouble; as when we impose from wrought-off forms, we have nothing to do but to put the chase with the furniture and quoins about the pages, in the same manner as we take it off from the form we are stripping.

In order to be accurate in altering the folios of the respective pages, according to their regular succession, the following tables of signatures and folios are given:—

A TABLE OF SIGNATURES AND FOLIOS,

EXTENDED TO FOUR ALPHABETS.

No. Sheets.	Signature.	Folio.	Quarto.	Octavo, Sheets.	Octavo, Half-sheets.	Twelves, Sheets.	Twelves, Half-sheets.	Eighteens.		No. Sheets.	Signature.	Folio.	Quarto.	Octavo, Sheets.	Octavo, Half-sheets.	Twelves, Sheets.	Twelves, Half-sheets.
1	A	0	0	0	0	0	0	B	1	46	3 A	181	361	721	361	1081	541
2	B	1	1	1	1	1	1	E	37	47	B	185	369	737	369	1105	553
3	C	5	9	17	9	25	13	H	73	48	C	189	377	753	377	1129	565
4	D	9	17	33	17	49	25	L	109	49	D	193	385	769	385	1153	577
5	E	13	25	49	25	73	37	O	145	50	E	197	393	785	393	1177	589
6	F	17	33	65	33	97	49	R	181	51	F	201	401	801	401	1201	601
7	G	21	41	81	41	121	61	U	217	52	G	205	409	817	409	1225	613
8	H	25	49	97	49	145	73	Z	253	53	H	209	417	833	417	1249	625
9	I	29	57	113	57	169	85	2 C	289	54	I	213	425	849	425	1273	637
10	K	33	65	129	65	193	97	F	325	55	K	217	433	865	433	1297	649
11	L	37	73	145	73	217	109	I	361	56	L	221	441	881	441	1321	661
12	M	41	81	161	81	241	121	M	397	57	M	225	449	897	449	1345	673
13	N	45	89	177	89	265	133	P	433	58	N	229	457	913	457	1369	685
14	O	49	97	193	97	289	145	X	505	59	O	233	465	929	465	1393	697
15	P	53	105	209	105	313	157	D	577	60	P	237	473	945	473	1417	709
16	Q	57	113	225	113	337	169	S	685	61	Q	241	481	961	481	1441	721
17	R	61	121	241	121	361	181	3 A	541	62	R	245	489	977	489	1465	733
18	S	65	129	257	129	385	193	G	613	63	S	249	497	993	497	1489	745
19	T	69	137	273	137	409	205	K	649	64	T	253	505	1009	505	1513	757
20	U	73	145	289	145	433	217	N	685	65	U	257	513	1025	513	1537	769
21	X	77	153	305	153	457	229	Q	721	66	X	261	521	1041	521	1561	781
22	Y	81	161	321	161	481	241	T	757	67	Y	265	529	1057	529	1585	793
23	Z	85	169	337	169	505	253	Y	793	68	Z	269	537	1073	537	1609	805
24	2 A	89	177	353	177	529	265			69	4 A	273	545	1089	545	1633	817
25	B	93	185	369	185	553	277			70	B	277	553	1105	553	1657	829
26	C	97	193	385	193	577	289			71	C	281	561	1121	561	1681	841
27	D	101	201	401	201	601	301			72	D	285	569	1137	569	1705	853
28	E	105	209	417	209	625	313			73	E	289	577	1153	577	1729	865
29	F	109	217	433	217	649	325			74	F	293	585	1169	585	1753	877
30	G	113	225	449	225	673	337			75	G	297	593	1185	593	1777	889
31	H	117	233	465	233	697	349			76	H	301	601	1201	601	1801	901
32	I	121	241	481	241	721	361			77	I	305	609	1217	609	1825	913
33	K	125	249	497	249	745	373			78	K	309	617	1233	617	1849	925
34	L	129	257	513	257	769	385			79	L	313	625	1249	625	1873	937
35	M	133	265	529	265	793	397			80	M	317	633	1265	633	1897	949
36	N	137	273	545	273	817	409			81	N	321	641	1281	641	1921	961
37	O	141	281	561	281	841	421			82	O	325	649	1297	649	1945	973
38	P	145	289	577	289	865	433			83	P	329	657	1313	657	1969	985
39	Q	149	297	593	297	889	445			84	Q	333	665	1329	665	1993	997
40	R	153	305	609	305	913	457			85	R	337	673	1345	673	2017	1009
41	S	157	313	625	313	937	469			86	S	341	681	1361	681	2041	1021
42	T	161	321	641	321	961	481			87	T	345	689	1377	689	2065	1033
43	U	165	329	657	329	985	493			88	U	349	697	1393	697	2089	1045
44	X	169	337	673	337	1009	505			89	X	353	705	1409	705	2113	1057
45	Y	173	345	689	345	1033	517			90	Y	357	713	1425	713	2137	1069
	Z	177	353	705	353	1057	529			91	Z	361	721	1441	721	2161	1081

The running titles, with the right folios to them, being put to the pages, we proceed to lock up the form; first carefully examining whether the pages of each quarter are of an exact length, for the difference even of a lead will cause them to hang. We ascertain their exactness by placing the ball of each thumb against the centre of the foot-stick, raising it a little with the pressure, and if the ends of both pages rise equal with the stick, it is a proof they will not bind; we then fit quoins between the side and foot-stick of each quarter, and the chase, till the whole form may be raised. And though locking up a form may be thought a trifling affair, yet it demands particular attention, for a careless or clumsy compositor may so twist and derange the matter by using too great a force in the locking up of one side or end of it, as to render it almost impossible to set it perfectly straight again. When the quoins have been pushed as far as we can, with the fingers, we make use of the mallet and shooting-stick, and gently drive them along the side-sticks at first, and then along the foot-sticks, taking care to use an equal force, and to drive them far enough up the shoulders of the side and foot-sticks, that the letter may neither belly out one way, nor hang in the other; and as to the lower quoins, they ought likewise to be driven to a station where they may do the office of keeping the letter straight and even. But before the quoins are driven up as tight as it is necessary they should be in order to secure the letter, it will be proper gently to plane down the form—after the form is completely locked up, it should receive another planing. It often occurs, that the quoins from having been locked up wet, stick so tight to the furniture as to render it troublesome to unlock them; in such cases the inconvenience is remedied by driving the quoins up instead of down, which immediately loosens them, and it unlocks with ease.

When the form is delivered to the pressman to pull a proof, it is requisite that such proof ought to be pulled as clear and as neat as any sheet in the heap that is worked off, in order that every correction may be observed by the reader. No form should be left without being rubbed over with a wet lie-brush, and the proof and form delivered over to the compositor for his care.

OF CORRECTING IN METAL.

By correcting, is understood the rectifying of such faults, omissions, and repetitions, as are made by the compositor, either through inadvertency or carelessness. Correcting is the most disagreeable part of the compositor's business, attended not only with loss of time, but great fatigue, from leaning over the stone, and is therefore extremely prejudicial to health. To avoid this, careful distribution, silence, and attention when at work, is recommended. The noise and confusion which too often prevail in a printing-office, from light and frivolous conversation, not only retard business, but at the same time distract the attention of the compositor from the subject he has in hand, and cause him to run into such mistakes which can only be rectified by loss of time, and fatigue at the imposing stone. Some men, no doubt, are capable of supporting a conversation, and at the same time compose correctly, but their noise confuses those who are unable to preserve that accuracy but in quiet, and by close attention to their copy. The practice of talking, while distributing, is too much followed; and though those who may be composing need

not join in the conversation, yet they are disturbed, and their attention diverted from their proper business.

The first proof contains generally only the errors of the compositor; but it is almost impossible to discover the whole of them in the first reading; he is therefore expected to correct all his own blunders, whether in the first or second proof, without making a charge for it. Immediately on receiving his proof, the compositor should begin to correct it, as it is of the utmost importance not to delay it; for it may occasion his standing still for want of letter; or be the means of keeping a press idle. When he has gathered as many corrections between the thumb and fore-finger of his left hand as he can conveniently hold, and an assortment of spaces on a piece of paper, or, which is more convenient, in a small square box, with partitions in it, let him take the bodkin in his right hand, and instead of raising each letter he may have occasion to alter, he should place the point of the bodkin at one end of the line, and with the fore-finger of his left hand against the other, raise the line altogether, sufficiently high to afford him a clear view of the spacing; he may then change the faulty letter, and alter his spaces before he drops the line. By observing this method, he will not injure the type, which must be the case where the bodkin is forced either into their sides or heads; it likewise ensures a greater degree of regularity where there may be occasion to alter the spacing, and will not take up more time than the other method. The most careful compositor cannot at all times avoid leaving a word or words out, or composing the same word twice; when this happens, he should consider the best mode of rectifying the accident, either by driving out or getting in above the error or below it; this ascertained, let the matter be taken upon a galley, and overrun in the composing stick;—overrunning on the stone is an unsafe, unworkmanlike, and dilatory method, destroys the justification, and renders the spacing uneven. “But,” says a previous writer upon the subject, “a great deal of trouble might be saved in cases of outs and doubles, would correctors try to add as much as will fill up the double; (or to shorten the matter, to make room for an out;) unless both the one and the other are too considerable for that expedient; which otherwise might be safely ventured, without either castrating or corrupting a writer’s meaning. This would be a sure means to secure a neat compositor’s workmanship and care in true spacing his matter; whereas that beauty is lost by alterations and overrunning.”

In correcting, care should be taken not to hair-space a line, if it can possibly be prevented, but avoid it by either overrunning backward or forward. He should also, in overrunning the matter, use the hyphen as little as possible; for though he may carefully follow the instructions laid down in this work, on the subject of spacing and dividing, yet the effect of his attention will be completely destroyed, if not followed up at the stone.

The following observation has been made with respect to the despatch of proofs:—“The first proof being corrected, a perfect sheet is pulled clean, to be sent to the author, or to the person by him authorized; either of whom, if they understand the nature of printing, will not defer reading the sheet, but return it without any alteration, perhaps, to be made ready for the press. But because such good authors are very scarce, compositors are discouraged every time they send a proof away, as not knowing when or how it may be returned, and how many times more it will be wanted to be seen again, before the author is tired, or rather ashamed, of *altering*.”

TYPOGRAPHICAL MARKS EXEMPLIFIED.

The art of printing, about thirty years ago, received very [^] important improvemens by the subst[^]itution of iron for wooden presses. The [^]advantages of the iron presses in working are very con[^]siderable both saving[^][in] labour and time.

The first arises from the beautiful CONTRIVANCE of the levers, and the power of the press being almost incalculable at the moment of producing the impression; and this is not attended with a correspondent loss of time, as is the [^]case in the ordinary arrangement of the mechanical powers, because the power is exerted only at the moment of pressure, being before that adapted to bringing down the platten as quickly as possible. This great power of the press admits of a saving of time by printing the whole sheet of paper at one pull, the platten being made sufficiently large for the purpose; whereas, in the old press, the platten was only half the size of the sheet. [For the change of the material of which presses are made, the trade are indebted ²principally ¹to the ingenuity of earl Stanhope; and brought to perfection by the late ingenious George Clymer, under the well adapted name of the Columbian press. There are likewise many other descriptions of presses, professing to be improvements, but with the exception of these above-named, and the Imperial and Albion, few are deserving of support. These presses have contributed to excellence and beauty of the noble art of typography.

o/cps
t w/f

tr
no break

b.c.
L L L

9

2
6

lead

£
stet
tr/rom

H

ital

the

s.c.

The above specimen includes almost every variety of error which occurs, except that the line, instead of being drawn through the errors, is here, for typographical convenience, placed under them. Of the marginal marks, it will be seen that many are merely contractions or initials, as *l. c.*, lower case, or small letters; *s. c.*, small capitals; *cps.*, capitals; *ital.*, italic; *rom.*, roman; *tr.*, transpose; *wf.*, wrong fount, used to point out any letter that is of a wrong size; *d* (made somewhat like the Greek *dele*), or take out; *stet*, (let it stand) is used where a word that had been marked out is intended to remain, the word at the same time being dotted under. The remaining technical marks are few and simple, and will be readily understood by the intelligent reader on comparing the specimen with the opposite page, in which the extract is given, and corrected according to the marginal directions, without any further explanation.

The page when corrected will read as follows.

The art of PRINTING, about thirty years ago, received very important improvements by the substitution of iron for wooden presses. The advantages of the iron presses in working are very considerable both in saving labour and time. The first arises from the beautiful contrivance of the levers, and the power of the press being almost incalculable at the moment of producing the impression; and this is not attended with a correspondent loss of time, as is the case in the ordinary arrangement of the mechanical powers, because the power is exerted only at the moment of pressure, being before that adapted to bring down the platten as quickly as possible. This great power of the press admits of a saving of time and expense, by printing the whole sheet of paper at one pull, the platten being made sufficiently large for the purpose; whereas, in the old press, the platten was only half the size of the sheet.

For the change of the material of which presses are made, the trade are principally indebted to the ingenuity of *earl Stanhope*; and brought to perfection by the late ingenious George Clymer, under the well-adapted name of the *Columbian* press. There are likewise many other descriptions of presses, professing to be improvements, but with the exception of these above-named, and the *Imperial* and *Albion*, few are deserving of support. "These presses have contributed to the excellence and beauty of the noble art of **TYPOGRAPHY**."

OF A FOUNT OF LETTER.

A FOUNT of letter consists of the following sorts:

1. Capitals: A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, Æ, Œ; and the same in *Italic*.
2. Small Capitals: the same in *Italic* in some founts, chiefly the Scotch.
3. Lower case: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, &, æ, œ, &c.; the same in *Italic*.
4. Figures, &c.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0. £, fl, @, ¢, ¼, ½, ¾, ⅛, ⅜, ⅝, ⅞, ⅔, ⅓, ⅔, /.
5. Points, &c.: , ; : . ? ! - ' [] () * † ‡ § || ¶ — — — — — ...
6. Spaces, &c.: Thick, middle, thin, and hair; n, m, two, three, and four m quadrats.
7. Accents: á, é, í, ó, ú, â, è, ò, ù, ä, ë, ï, ö, ü, â, ê, î, ô, û, ç.

These are the ordinary sorts cast to a fount of letter, and which the founders class into short, long, ascending, descending, and kerned letters.

Ascending letters are all the Roman and *Italic* capitals; and b, d, f, h, i, k, l, t.

Descending letters are g, j, p, q, y, in Roman and *Italic*.

Kerned letters are such as have part of their face hanging over either one or both sides of their square metal or shank. In the Roman, f and j, are the only kerned letters; but in the *Italic*, d, g, j, l, y, are kerned on one side, and f on both sides of its face.

Their beaks being liable to accident, especially the Roman f, when at the end of a line, they should be cast in a larger proportion than might otherwise be necessary; and more particularly the *Italic* f.

Some Italic capitals are kerned on one side of their face ; but none ought to be more attended to than *A, T, V, W*, that their angles may not fall upon an ascending letter that may stand next to them.

These are the classes into which letter-founders divide the sorts of a fount, without including accented letters.

The double letters are fi, ff, fl, ffi, and flf, which are formed for the convenience of one kerned letter joining with another, as their beaks would inevitably receive damage by bearing against each other.

Of the Names of Letter, as regards its Size, and the Proportions of one Size to another.

THE names of the different bodies of letter here exhibited in their descending orders, are according to the proper appellation which is given to each of them in England, France, Germany, and Holland ; by comparing one with the other, we may endeavour to account for the names of some of them.

This variety is still increased by the various faces and bodies of different founts of each kind, so that it may be said a large, medium, and small, may be added to each.

ENGLISH.	FRENCH.	GERMAN.	DUTCH.
	Grosse Nomporeille.		
	Gros Double Canon	Imperial.	
	Double Canon	Real.	
1 French Canon	Gros Canon	Missal	Parys Romeyn.
2 Two Lines Double Pica	Trismegiste	Sabon	Groote Kanon.
3 Two Lines Great Primer	Deux Points de Gros Romain	Canon	Kanon.
4 Two Lines English	Petit Canon, ou deux Saint Augustins	Roman	Dubbelde Augustyn.
5 Two Lines Pica	Palestine (deux Ciceros)		Dubbelde Mediaan.
6 Double Pica (two Small Picas)	Gros Paragon (une Philosophie) et un Petit Romain	Text, or Secunda	Dubbelde Dessendiaan
7 Paragon (two Long Primers)	Petit Paragon (deux Petits Romains et un Petit Texte)	Paragon	Paragon.
8 Great Primer (two Bourgeois)	Gros Romain (un Petit Romain) et un Petit Texte	Tertia	Text.
	Gros Texte (deux Petits Textes)		
9 English (two Minions)	Saint Augustin (un Petit Texte et une Nomporeille)	Mittel	Augustyn.
10 Pica (two Nonpareil)	Cicero (deux Nomporeilles)	Cicero	Mediaan.
11 Small Pica (two Ruby)	Philosophie (une Mignonne et une Parisienne)	Brevier, or Rheinländer	Dessendian.
12 Long Primer (two Pearl)	Petit Romain (une Nomporeille et une Parisienne)	Corpus, or Garmond	Garmond.
13 Bourgeois (two Diamond)	Gaillarde (deux Parisiennes)		Burgeois.
14 Brevier	Petit Texte	Petit, or Jungfer	Brevier.
15 Minion (Half English)	Mignonne	Colonel.	
16 Nonpareil (Half Pica)	Nomporeille	Nomporeille	Nompareil.
17 Ruby.			
18 Pearl, (Half Long Primer)	Parisienne, ou Sedanoise	Perl.	
19 Diamond (Half Bourgeois)			

The following table, showing the true standard of each body, with the number of lines to a foot, will enable any person to ascertain the character of the respective founts :

Canon has 18 lines & a Great Primer	Great Primer has 51½ lines	Brevier has 112½ lines
Two-line Double Pica has 20½ lines	English has 64 lines	Minion has 128 lines
Two-line Great Primer has 25½ lines	Pica has 71½ lines	Nonpareil has 143 lines
Two-line English has 32 lines	Small Pica has 83 lines	Ruby has 160½ lines
Two-line Pica has 35 lines	Long Primer has 89 lines	Pearl has 178 lines
Double Pica has 41½ lines	Bourgeois has 102½ lines	Diamond has 205 lines

Of the Number of each Sort cast to a "Bill, " Roman and Italic.*

To enter into the minutiae of the different sorts requisite to form a complete fount for every language printed in the Roman character, would extend the limits of the work

* Letter founders call 3000 lower case m's a bill, and proportion all other sorts by them ; so that a whole bill of Pica makes 500 lbs.—1500 m's, or half a bill, 250 lbs.

beyond its proper bounds, I shall confine myself to the improved scale of the present day, calculated for our own language, to which supplements, by the founders called *imperfections*, may be afterwards cast, so as to render the fount serviceable for any other. The Latin and French require more of c, i, l, m, p, q, s, u, and v, than the English; but until such sorts become really necessary, it would be useless to cast them. When a work is completed for which such sorts were serviceable, it may then be proper, to prevent their remaining inactive, to cast up to them—by which means the fount will receive considerable increase when employed again in the English language. A perfect scale is of the utmost importance and utility, as it does away the necessity, in a great measure, of casting imperfections, which too often differ from the original fount, either in thickness, in height, in depth, or in lining, even when cast in moulds of the same body. This is a serious evil, and particularly destructive to a fount of letter. It reflects discredit not only on the founder, but the printer, in the opinion of those unacquainted with the art, who consider every defect as an error of the press.

The following is reckoned by the founders a regular bill—perfect in all its sorts—for though some founts have neither small capitals, accented letters, nor italic, yet so rarely is a fount of the present day ordered without them, that it is at the option of the printer to omit them in this scale on giving his order, should he be so inclined, and proportion their weight to the other sorts, than not to present the bill in as complete a form as possible.

*A Bill of Pica Roman, and Half a Bill of Italic, weighing 800lbs.**

ROMAN.										ITALIC.									
a ...8500	ff ...400	, ...4500	A ...600	A 300	a 1700	ff 80	A 120	;160											
b ...1600	fi ...500	; ... 800	B ...400	B 200	b 320	fi 100	B 80	:120											
c ...3000	fl ...200	: ... 600	C ...500	c 250	c 600	fl 40	C 100	P 40											
d ...4400	ffl ...100	2000	D ...500	D 250	d 880	ffl 20	D 100	! 30											
e 12000	ffi ...150	- ...1000	E ...600	E 300	e 2400	ffi 30	E 120	(..... 60											
f ...2500	æ ...100	? ... 200	F ...400	F 200	f 500	æ 20	F 80												
g ...1700	œ ... 60	! ... 150	G ...400	G 200	g 340	œ 12	G 80												
h ...6400	—	, ... 700	H ...400	H 200	h 1280	—	H 80												
i ...8000	1510	(... 300	I ...800	I 400	i 1600	302	I 160												
j ... 400	—	[... 150	J ...300	J 150	j 80	—	J 60												
k ... 800	à ...200	* ... 140	K ...300	K 150	k 160	à ...20	K 60												
l ...4000	è ...100	+ ... 100	L ...500	L 250	l 800	è ...50	L 100												
m 3000	ì ...100	+ ... 100	M ...400	M 200	m 600	ì ...20	M 80												
n ...8000	ò ...100	\$... 100	N ...400	N 200	n 1600	ò ...20	N 80												
o ...8000	ù ...100	... 100	O ...400	O 200	o 1600	ù ...20	O 80												
p ...1700	á ...100	¶ ... 60	P ...400	P 200	p 340	á ...20	P 80												
q ... 500	é ...250	—	Q ...180	q 90	q 100	é ...20	Q 36												
r ...6200	í ...100	10,000	R ...400	R 200	r 1240	í ...20	R 80												
s ...8000	ó ...100	—	S ...500	s 250	s 1600	ó ...20	S 100												
t ...9000	û ...100	1 ...1300	T ...650	T 326	t 1800	û ...20	T 130												
u ...3400	ä ...200	2 ...1200	U ...300	U 150	u 680	ä ...40	U 60												
v ...1200	ë ...200	3 ...1100	V ...300	V 150	v 240	ë ...40	V 60												
w ...2000	ï ...100	4 ...1000	W ...400	w 200	w 400	ï ...20	W 80												
x ... 400	ö ...100	5 ...1000	X ...180	x 90	x 80	ö ...20	X 36												
y ...2000	ü ...100	6 ...1000	Y ...300	Y 150	y 400	ü ...20	Y 60												
z ... 200	â ...100	7 ...1000	Z ... 80	z 40	z 40	â ...20	Z 16												
&... 200	ê ...100	8 ...1000	Æ ... 40	Æ 20	ê ...40	ê ...20	Æ 8												
	î ...100	9 ...1000	Œ ... 30	Œ 15	—	î ...20	Œ 6												
107,100	ô ...100	0 ...1300			21,420	ô ...20													
	û ...100	—	10,660	5,331		û ...20	2132												
	ç ...100	10,900				ç ...20													
		2,550					490												

* Large quadrats are not included in this bill, the various sizes may be estimated at 80lbs. N.B. Although the proportion of each sort is given in this scale, still it may be observed, that founders differ also in this respect, which is another proof of the want of a uniform system in their business.

Some master printers, in ordering a fount of letter, have a certain portion of it sent home complete, while the other part they reserve to be cast afterwards, as imperfections—by which means they are enabled to ascertain the state of their fount in an early stage, and make it perfect without going beyond the weight they originally intended, or incurring an additional expense. This mode carries with it strong grounds for recommendation.

PRINTERS divide a fount of letter into two classes,—the upper case, and lower case. The upper case sorts are capitals, small capitals, accented letters, fractions, and references. The lower case consists of small letters, double letters, points, figures, spaces, quadrats, &c. each of which I shall treat of as concisely as possible under distinct heads.

CAPITALS.

THE use of capitals has been considerably abridged of late years; and the antiquated method of using them with every substantive, and sometimes even with verbs and adverbs, is now discontinued. They are considered, in the present day, as necessary only to distinguish proper names of persons, places, &c. There are, however, some particular works in which authors deem it essential to mark emphatical words with a capital; in such cases, and there can be no general rule to guide the compositor, it is requisite that the copy be sent by the author properly prepared in this particular, to the printer, or he will become liable to the charge the compositor is allowed to make for his loss of time in following his alterations. The method of denoting a capital, or word of capital letters in manuscript, is by underscoring it with three distinct lines. Capitals, of whatever body, if they are well proportioned, look well in titles, inscriptions, &c. but it requires taste and judgment in the compositor to display them to advantage. The mode of spacing lines set in capitals, in some particular instances, or to prevent two lines from being the same length in a title-page, may be necessary, and, used with judgment, have a very pretty effect.

SMALL CAPITALS.

SMALL CAPITALS are in general only cast to Roman founts,* and are used for the purpose of giving a stronger emphasis to a word than can be conveyed to it by its being in italic. They are likewise used for running heads, heads of chapters, &c. instead of italic, according to the fancy of the printer. The first word of every section or chapter is generally put in small capitals, either after a capital of its own body, or one of a larger size, called a cock-up letter. They are likewise of considerable service in the display of a title-page, particularly in setting the catch lines. In manuscript, small capitals are denoted by having two lines drawn under them. The small capitals c, o, s, v, w, x, z,† so closely resemble the same letters in the lower case, as to require particular attention in distribution.

ACCENTED LETTERS.

THOSE which are called accented by printers, are the five vowels, marked either with an

Acute á é í ó ú Circumflex ... â ê î ô û Long ā ē ī ō ū

Grave à è ì ò ù Diaeresis ä ë ï ö ü Short ă ǣ ĭ ǫ ŭ

Those who call accented letters all that are of a particular signification, on account of

* Some of our founders cast italic small capitals to most, if not the whole of their founts.

† Smith has suggested, that those letters should be cast either thicker, or with a different nick.

their being distinguished by marks, reckon the French ç, the Spanish u, the Welch w, and y, in the class of accented letters, though not vowels. As the longs and shorts are used only in particular works, they are not cast to a fount of letter unless ordered.

NUMERAL LETTERS.

NUMERAL LETTERS were used by the Romans to account by, and were seven in number, I V X L C D M. The reason for choosing these figures seems to be this : M being the first letter of *mille*, stands for 1,000, which M was formerly written CIO Half of that, viz. IO or D, is 500.—C, the first letter of *centum*, stands for 100 ; which C was anciently written E, and so half of it will be 50, L. X denotes 10, which is twice 5, made of two V's, one at top and the other at bottom. V stands for 5, because their measure of five ounces was of that shape ; and—I stands for 1. because it is made by one stroke of the pen. The Romans also expressed any number of thousands by a line drawn over any numeral less than a thousand ; thus, $\overline{V}$ denotes 5,000, $\overline{LX}$ 60,000 : so likewise M is 1,000,000, $\overline{MM}$ 2,000,000, &c. Upon the discovery of printing, and before capitals were invented, small letters served for numerals, which they have done ever since ; not only when the Gothic characters were in their perfection, but even after they had ceased, and the Roman was become the prevailing one.

Instead of seven letters used by the Romans, the Greeks employed their whole alphabet, and more than the alphabet ; for they contrived three symbols more, and made their numerals to consist of twenty-seven sorts, which they divided into three classes ; the first, to contain units ; the second, tens ; and the third, hundreds.

The manner of counting by letters is derived from the Hebrews, who for that purpose made use of the letters of their alphabet, without the assistance of other symbols.

ARITHMETICAL FIGURES.

ARITHMETICAL or Arabic figures are nine in number, besides the cypher, or nought, which, though of itself of no signification, makes a great increase in the figure to which it is joined, either singly or progressively. The excellence of figures does not consist in their having soft and fine strokes, but rather in such circles and lines as bear a proportion with the strength of their face. Both Scratched and Italic figures, though once used, are now entirely laid aside in England, yet the latter still prevails in some parts abroad.

SPACES.

THE use of spaces is, to separate one word from another, so that the reading may appear easy and distinct. As they are cast to all thicknesses, from hair space to five to an m, the compositor can find no difficulty in keeping a uniformity in spacing of his matter.

QUADRATS.

AN m-quadrat is the square of the letter to whatever fount it may belong ; an n-quadrat is half that size. They are much used in figure work, and unless cast true, the most trifling variation is instantly discovered. The same observation holds good with respect to figures. M-quadrats generally begin a paragraph, by indenting the first line ; it is likewise the proper space after a full point, when it terminates a sentence within a paragraph.

N-quadrats are generally used after the comma, semicolon, &c. and sometimes after a kerned letter ; but the use of the n-quadrat in spacing must be guided by circumstances. Two-m, three-m, and four-m quadrats are likewise cast for break lines, but particularly for poetry, for which purpose they require to be as exact in their depth as the m or n-quadrat, or the matter will stand uneven where a number of them come together. The inconvenience arising from founts of the same body not agreeing in depth is great, where the quadrats, through necessity, are sometimes mixed. It is a serious evil, and much to be deplored that some method cannot be adopted to check it. One cause, and too often the chief one, of sorts being mixed in a printing-office, is that of *borrowing* and *lending*, a system, which every printer having any regard for his material will never adopt, as the expense of the sorts required would be less than the injury done to his type.

Reglets, of the same body with the letter of the work, are sometimes used, instead of quadrats, for white lines ; but, from being often wetted, are apt to swell, and cannot be depended on ; it would be better, therefore, (except for large jobs) to use space leads, which are cast from four, six, and eight to a pica, and from four m's to any length required.

RULES.

RULES are either brass, metal, or space rules ; the first are made by printers' smiths and joiners, out of rolled sheet brass, and the other two cast by letter-founders.

BRASS RULES ought to be exactly letter high ; and being generally cut to the length of sixteen inches, their equality, as to height, from end to end, is not always to be depended on from every one who sets up for a printer's joiner, or brass-rule cutter. When brass rule is placed between matter, a thin lead or scaleboard should be placed at the side to bear it off. In mixt matter, or italic, a thin lead, at least, is required before and after a brass rule, to prevent it touching upon *d, f, l*, at the fore-side, and upon *f, g, j, p, y*, at the hind-side. If driven to the necessity of piecing brass rule, the compositor should endeavour to dress the shorter pieces, by rubbing them on the stone, so as they appear as one length. Mr. William Muff, printers' joiner and brass-rule cutter, at Bradford, in Yorkshire, has introduced to the trade a beautiful *waved* brass rule,* and, when used with judgment has a very pretty effect.

METAL RULES, like quadrats, are cast to m's, from the size of one to four, sometimes to an n, and are used in schemes of accounts, to direct and connect each article with its summary contents, where they stand opposite, and distant from each other ; m rules sometimes stand for *noughts* in columns of figures. Sometimes a rule stands for a sign of repetition, in catalogues of books, goods, &c. where it implies *ditto* or *ejusdem*, instead of repeating an author's name, with the title of every separate treatise of his writing : but it must be observed, that no sign of repetition, either *ditto*, *ejusdem*, *idem*, or the rule, must be used at the top of a page or column ; but that the name of the author, or the merchandise, must be set out again at length ; and then if their series continues, to denote the continuation thereof, at every article subsequent, by a rule of three or four m's, so as to range, instead of extending the rule to the different lengths of names. A metal rule likewise stands for *to*, or *till*, as chap. xvi. 9—25. that is, verse nine to twenty-five. At

* Invented and first introduced by J. Muff, Music Seller, Leeds.

other times it serves for an index, to give notice that what follows it is a corollary of what has preceded; or otherwise matter of import and consequence. When made to line and join accurately, metal rules are very useful, as they serve not only for rectilinear, but also perpendicular progressions, where no other rules are to touch them.

SPACE RULES may be cast to various widths, from one m to six, to whatever body ordered; and when they are of a neat look, and made to join well, may be considered valuable sorts. Two of them generally answer to the depth of a pearl body.

SUPERIORS.

SUPERIOR LETTERS and FIGURES have already been treated of under the head of References, it is only requisite further to notice them here, than to observe, that they should contain no more than the bare alphabet, without any double letters. Neither ought the j to be used as a reference, on account of its being a descending letter.

FRACTIONS.

FRACTIONS, or broken numbers in arithmetic, may be had to any body required; their goodness does not consist in their having a small and fine face, so much as in showing themselves full and clear, and preserving due proportion. When a fraction happens with large-bodied figures, such as great-primer, and upwards, it is usually set out at length, unless nonpareil figures can be conveniently had, which may be justified with neatness.

QUOTATIONS.

QUOTATIONS are cast to two sizes, of unequal squares, which, as they are formed for use, are called *broad* and *narrow*, and when properly dressed and finished, are useful in a printing-office. They should not be cast so high as they sometimes are, for no other purpose than to increase their weight. Justifiers are cast for broad and narrow quotations, to all sizes, from double to pearl inclusive, for the purpose of ranging the side-note with its proper text, in doing which great care is requisite when many come in a page.

METAL FURNITURE.

METAL FURNITURE has been introduced to the trade, and for book-work is of the greatest utility, when kept solely for that purpose. It is cast to all requisite sizes and thicknesses, from thirty-twos to octavo.

LEADS

form a very important part of a printer's stock in trade, since it is scarcely possible to set up a single page in which they may not be usefully employed. The bodies are regulated by pica standard, and they are usually cast four, six, or eight to pica; but are occasionally varied from one down to fourteen to pica. The lengths also vary according to convenience; twenty m's pica may be called about the average length for common use; though they are cut to almost every length, in order that, by being combined, they may suit every measure. With 4, 5, 6, 7, 9, 13, 15, and 20, every combination of leads, from four to one hundred, can be formed. Both for leads and brass rule, a small machine may be had of the printer's joiners, for cutting them to exact lengths, with accuracy.

TWO-LINE LETTERS.

THEY are cut to all the bodies in general use, and are found extremely useful in titles, the beginning of chapters, &c. A very great improvement has of late taken place in the cut of two-line letters,—being *condensed*, they add both to the beauty and variety in titles.

FLOWERS.

FLOWERS are used for borders, and these, with the great variety of new corners, are certainly much improved; they are cast to all the regular bodies of letter.

OF ITALIC LETTER.

ITALIC letters owe their invention to Aldus Manutius, who, in the year 1490, erected a printing-office in Venice, where he introduced the Roman types of a neater cut, and invented that beautiful letter which we and most of the nations in Europe know by the name of italic, though some of the German writers and their followers have attempted to call it the *cursive*, to obliterate the memory of its original descent. Manutius invented this sort of letter in order to accomplish the design he had conceived of executing a collection of the best works in a smaller form (8vo.) than was at that time in use, the first idea of which, we are assured, was given to him by Petrarch's writing; and he employed Francisco di Bologna, an able engraver, who had engraven all the other characters in his printing-office, to execute them, and which was for some time called after the name of the inventor, *Aldine*. He obtained several privileges for the exclusive use of this italic type from the senate of Venice, as well as the pontiffs, Alexander VI, Fabius II, and Leo X.

Italic type was originally designed to distinguish such parts of a book as might be said not strictly to belong to the body of the work, as prefaces, introductions, extracts, annotations, &c. all of which it was the custom formerly to print in italics, so that at least two-fifths of a work appeared in that character. In the present age it is used more sparingly, the necessity being supplied by the more elegant mode of introducing extracts within inverted commas, and poetry and annotations in a smaller-sized type. It is of service often in displaying a title-page, (though for that purpose at present very sparingly introduced) or distinguishing the head or subject matter of a chapter from the chapter itself; but it is mostly used in spelling-books, grammars, dictionaries, &c. to distinguish more readily to the learner the different languages or parts of speech. It is greatly to be wished that the use of it could be governed by some rules. Blair, in his *Belles Lettres*, justly observes, that crowding all the pages of a book with italic characters, is the same with using no such distinction at all. It also very materially retards the progress of the compositor, who has the trouble of repeatedly moving from one case to another. Not only does italic confuse the reader, but it destroys, in a great degree, the beauty of printing, because the bold face of the Roman suffers by being contrasted with the fine strokes of the italic; that symmetry is destroyed which it is necessary and desirable to preserve, the position of the Roman being perpendicular, and that of the italic, oblique. A comparison of the agreeable appearance of a page in which no italic words are seen straggling, with one in which the pleasing regularity of the Roman print is here and there broken in upon by the intrusions of a discordant type, will be at once sufficient to mark the abuse of using it without regard either to uniformity, or where the sense requires a

distinguishing mark on a particular word or subject, such as in critical and satirical works. In the above observations I wish it to be understood, as arguing not against the *use* of italic type, but the *abuse* of it.

Black Letter.

THE BLACK LETTER which is used in England, descended from the Gothic characters ; it is called Gothic by some ; and Old English by others ; but printers call it black letter, on account of its taking a larger compass than either roman or italic, the full and spreading strokes thereof appearing more black upon paper. On the introduction of the Roman character,* its use began to decline, and it was seldom used except in law works, particularly statute law ; it was at length expelled from these, and only made its appearance in the heads of statutes, &c. The improved modern blacks, produced by the founders, has been the means of rescuing it from oblivion, to which the old characters had been nearly consigned. It is cast to all the various sizes, both full-faced and open.

Script Type.

SCRIPT was in former times called *Cursive*, and upon which, the observation of Rowe Mores will still apply. He says, "The cursorial is a flimsy type, imitating a pseudo-Italian hand-writing, and fitted for ladies and beaux-candidates for fair places donative, who court a plattin to save unnecessary trouble, and to conceal their management of a pen." Though great improvements have been made in script types, their use is likely to be superseded by the invention of lithographic circulars.†

Ronde Type.

RONDE TYPE, in imitation of secretary, has been very lately introduced to the notice of the profession, and, may, in some particular circulars, be of service. The specimen here given is cast on English body. A type called German Text has also been lately introduced.

PROPERTIES AND SHAPES OF TYPES.

IN the early ages of printing, the uniform character used was in imitation of the *old Gothic*, or *German*, from which our *old English*, or *Black*, was afterwards formed, and still merits our veneration as the character in which our immortal Caxton, and the early professors of the art printed their books. That good Roman makes the best figure in a specimen of typography, cannot be disputed ; and this superiority is now greatly improved. A printer, in his choice of types, should not only attend to the cut of the letter, but also observe that its shape be perfectly true, and that it lines or ranges with accuracy. The ingenious Mr. Moxon says "that the Roman letters were originally intended to be made to consist of circles, arcs of circles, and straight lines ; and that, therefore, those

* In the year 1050, Alphonsus VI., king of Spain, introduced the Latin, and put an end to writing in Gothic throughout his dominions.

† M. Firmin Didot has the merit of inventing or introducing a script of a peculiar form ; but a great obstacle in bringing it into general use, was the difficulty of composition, in learning the necessary variations and combinations of character ; as some characters, the *r* for instance, have eight variations ; but, when properly combined, gives an appearance which scarcely admits of improvement. M. Boileau, an ingenious French engraver, invented a script, the tendency of which is, to unite the beauty of Didot's plan with greater facility of composition.

letters that have these figures either entire or else properly mixt, so as the course and progress of the pen may best admit, may deserve the name of true shape." The following directions may not be undeserving of the purchaser's examination when ordering types :

Whether the letter stands even, and in line ; which is the chief of good quality in letter, and makes the face thereof sometimes to pass, though otherwise ill-shaped. Whether it stands parallel ; and whether it drives out or gets in, either at the head, or the foot, and is, as printers call it, *bottle-arsed* ; which is a fault that cannot be mended but by rubbing the whole fount over again. Whether the thin lower-case letters, especially the dots over the i and j, are *come* in casting. Whether the break is ploughed away and smoothened. Whether it be well scraped, so as not to want rubbing down by the compositor. Whether each letter has a due proportion, as to thickness ; and whether they are not so thin as to hinder each other from appearing with a full face ; or so thick as to occasion a gap between letter and letter. Whether it be well bearded. Whether it have a deep and open, single or double nick, different from other founts of the same body, and in the same printing-office. This last may appear a trifling consideration ; but in a large fount the difference in weight will be considerable, and consequently a saving to the purchaser. A deep nick is an advantage to the compositor, from it more readily catching the eye than a shallow one, and consequently greatly facilitates him in his business.

The quality of the metal of which type is composed, demands also the particular attention of the printer. This is, however, dependent entirely upon the discretion of the founders, and a considerable difference prevails among them, often to the detriment of the printer, to whom it is a matter of great importance that his type should repay him ample interest for its immense expense. Mr. Moxon gives the following particulars respecting the quantity of each sort of metal he made use of in his composition for type. "For 28 lbs. of [type] metal, it required 25 lbs. of lead, mixed with 3 lbs. of iron and antimony mixed together."

In Germany, steel, iron, copper, brass, tin, and lead, are incorporated with each other by means of antimony ; and the quality of this metal is such, if properly prepared, that it will not bend, but break like glass ; it is harder than tin and lead, something softer than copper, and melts sooner than lead. How the metal is prepared in Holland is not precisely known ; but there is sufficient reason to suppose that it differs from the German and the English.

REGULAR AND IRREGULAR-BODIED LETTER.

THE class of regular-bodied letter takes in, Great Primer, English, Pica, Long Primer, Brevier, Nonpareil, and Pearl. The several sorts of irregular bodied letters are, Paragon, Primer, Small Pica, Bourgeois, Minion, and Diamond. They are called irregular, because they are of intermediate sizes to letter of regular bodies ; a standard for which, no doubt, was fixed by former printers and founders. Among the irregular-bodied sorts of letter none has taken so great a run as Small Pica ; and very considerable works have been done in it. For the rest, irregular-bodied letter is apt to cause confusion in a printing-office, and is, therefore, the less countenanced by most printers.

Though all founders agree in the point of casting letter to certain bodies, yet, in the article of casting each body always to one and the same size, they differ; insomuch that not only founders of different places, but of the same residence, and even each in particular, often vary in height and depth; both of which seem rather to have increased. Few offices, of any extent, are without two or three founts of a particular size letter, cast by different founders. It often occurs, that a sort may be short in one, of which there is a superfluity in the other; but from their different face, &c. cannot be used together; in this case, not only an expense is incurred, but a delay occasioned to the work from the time it necessarily takes to cast imperfections. Recourse is too often had to borrowing, and thus do founts of different offices, and of different faces become mixt, to the serious injury of all.

Another, and very considerable fault, may be alleged against the founders, who seem to have neglected, in their zeal to produce beautiful specimens, that exactness as to the depth of their types, which is so essentially necessary. It is often witnessed, in a fount of new letter, where a particular sort was run down the side of the same number of lines in the body, a variation of at least one-third of its own depth. This is fatal to table-work, as it entirely destroys that nicety so requisite in justification.

SIGNS AND ABBREVIATIONS.

MANY are the signs and symbols which astronomers have invented to impose upon the credulity of the vulgar, who are the chief supporters of almanacks; and especially of such as abound in predictions of any kind: among which may be reckoned those signs which give notice, on what day it is proper to let blood; to bathe and to cup; to sow and to plant; to take physic; to have the hair cut; to cut the nails; to wean children; and many other alike nonsensical observations, to which the lower class of people are particularly bigotted; besides giving credit to the marks that serve to indicate hail, thunder, lightning, or any occult phenomena. As the following form part of the stock of every printing-office, calculated for general book work, they are given, with their names and properties.

Mathematical, Algebraical, and Geometrical Characters.

The sign $+$ *plus* (more) signifies addition; as $4 + 2$, (read, 4 *plus* 2) means that 2 is to be added to 4. The sign $-$ *minus* (less) signifies subtraction; as $6 - 2$ (read, 6 *minus* 2) means that 2 is to be taken from 6. The sign $=$ *equal*, or the result of the preceding; thus $4 + 2 = 6$ and $6 - 2 = 4$, reads 4 plus 2 equal to 6. 6 minus 2 equal to 4. For the two last signs, (*minus* and *equal*), the m-rule, and the parallel justified horizontally, are too long, and may alter the meaning of the calculator with the whole course of the calculation. ∞ This sign was also formerly used to denote *equal*, but is become obsolete. $\times$ is the sign for multiplication. $:$ or $\therefore$ is an arithmetical equal proportion; as $7.3:13.9$; that is, 7 is as much greater than 3, as 13 is greater than 9. $::$ is the sign of two equal ratios, and is placed between them; as, $6.2::12.4$; that is, 6 is to 2 as 12 is to 4; or that the ratio of 6 to 2 is equal to that of 12 to 4. $\div$ denotes an arithmetical progression continued; as, $19 \div 16 \div 13 \div 10 \div 7 \div 4$; that is, 19 is as much

greater than 16, as 16 is greater than 13, as 13 is greater than 10, as 10 is greater than 7, as 7 is greater than 4. $\div\div$ denotes a continued geometrical proportion, or geometrical progression; as $16\div\div8\div\div4\div\div2\div\div1$; that is, 16 is to 8, as 8 to 4, as 4 to 2, as 2 to 1. □ Quadrat, or regular quadrangle; as, $\square AB = \square BC$; that is, the quadrangle upon the line AB is equal to the quadrangle upon the line BC. △ Triangle; as $\triangle ABC = \triangle ADC$. ∠ An angle; as, $\angle ABC = \angle ADC$. ⊥ Perpendicular; as, $AB \perp BC$. □ Rectangled parallelogram; or the product of two lines. √ Radix, root, or side of a square. $\sqrt[10]{}$ Square root. >, or >, greater than. <, or <, than. —: The differences, or excess. || Parallelism. ∽ Equiangular, or similar. ≡ Equilateral.

These, and other signs and symbols, are used in mathematical and algebraical works.

Celestial and Astronomical Signs.

° denotes a Degree; thus 45° implies 45 degrees. ' a Minute; thus $50'$ is 50 minutes. ", "", ""', denotes Seconds, Thirds, and Fourths: and the same characters are used where the progressions are by tens, as it is here by sixties.

The characters of the *Twelve Signs of the Zodiac*.—♈ Aries. ♉ Taurus. ♊ Gemini. ♋ Cancer. ♌ Leo. ♍ Virgo. ♎ Libra. ♏ Scorpio. ♐ Sagittarius. ♑ Capricornus. ♒ Aquarius. ♒ Pisces.

The characters of the *Planets*.—♄ Saturnus. ♃ Jupiter. ♀ Mars. ⊕ Earth. ♀ Venus. ☿ Mercurius. ☿ Georgium Sidus. ♁ Ceres. * Pallas. ♀ Juno. ♀ Vesta. ☉ Sun. ☾ Moon.

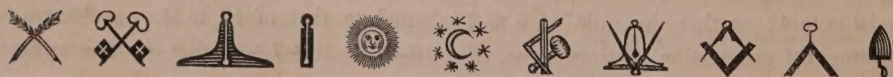
Aspects of the Planets.—♌ Conjunctio happens when two planets stand under each other in the same sign and degree. ♌ Oppositio happens when two planets stand diametrically opposite each other. △ Trigonus happens when one planet stands from another four signs, or 120 degrees; which make one-third part of the ecliptic. □ Quartile happens when two planets stand three signs from each other, which makes 90 degrees, or the fourth part of the ecliptic. * Sextile is the sixth part of the ecliptic; viz. two signs, which make 60 degrees. ♉ The Dragon's Head, or ascending node, and ♊ The Dragon's Tail, or descending node, are the two points in which, or near to which, the eclipses happen.

The *Moon* and its changes are thus designated:—☾ New Moon. ☾ First quarter of the Moon. ☾ Full Moon. ☾ Last quarter of the Moon.

Physical Signs and Abbreviations.

R stands for *Recipe*, or take. ā, aa, of each a like quantity. ℔ a Pound. ʒ an Ounce. ʒ a Drachm. ℥ a Scruple. j stands for one; ij for two; and so on. f signifies *Semi*, or half. P. stands for *particula*, a little part, and means so much as can be taken betwixt the ends of two fingers. P. æq. stands for *partes æquales*, or equal parts. q. s. *quantum sufficit*, or as much as is sufficient. q. p. *quantum placit*, or as much as you please. s. a. *secundem artem*, or according to art.

Masonic Emblems.



OF CASTING-OFF COPY.

EVERY writer of a Printers' Grammar seems to have pointed out a different method for the purpose of casting-off copy with accuracy and precision ; and which is an essential object, but a very unpleasant and troublesome task. Each mode has its distinct advantage ; but, after all, no satisfactory result can be attained, nor bookseller nor author be fully aware of the appearance his work will have, unless a specimen page be set up according to the calculation here given ; and then, by a revision of the figures, something may probably be produced satisfactory to all parties. Much difficulty and trouble are occasioned by copy irregularly written, containing interlineations, erasures, and variations in the size of the paper ; to these irregularities the attention must be closely directed, but they will too frequently baffle the best endeavours at calculation. Such a slovenly mode of sending works to press cannot be too much condemned.

The first thing necessary is, to take a comprehensive view of the copy, and to notice whether it is written even, whether it has many interlineations, &c. the number of break-lines, and whether divided into chapters and sub-heads, so that allowances may be made in the calculation, to prevent the plan of the work from being afterwards infringed on. These observations should be entered as a memorandum on a separate piece of paper, to assist the memory and save the trouble of re-examining the manuscript.

This preparation being made, take that part of the copy for calculation nearest the general tendency of the writing, and reckon the number of words contained in one line, previously counting a number of separate lines, so that the one adopted may be a fair average ; then take the number of lines in a page, and multiply the [one by the other, which again multiply by the quantity of folios the manuscript copy may contain, and thus we are put in possession of the amount of words contained in the work, with as little loss of time and as much accuracy as circumstances will admit ; the necessary allowances should then be made for break lines, chapters, insertions, &c. according to the observations previously made on the memorandum.

If the information has been furnished, as to what sized letter the work is to be done in, and what the width of the page, the measure is to be made accordingly, and after composing a few lines of the manuscript copy, we shall be enabled to form an opinion of the number of words which will come into each printed line ; then take the length of the page, generally double the number of m's contained in a single line, and multiply the one by the other, which will produce the information previously gained from the adoption of the same mode on the manuscript page ; then compare their results, and if the manuscript drive out, multiply the print by a larger number than the last folio of the writing ; and so, *vice versâ*, if the print drive out, we multiply it by a less, until we bring the number of words to agree ; the multiplier on the printed calculation will show what will be the last folio of the printed volume, which being divided into sheets according to the given size of the work, it will be ascertained whether it will bear to be leaded, or the chapters begin pages, &c. or whether it must be made up close, the measure widened, the page lengthened, or the size of the letter reduced.

Should the size of the page and letter be left to the opinion of the printer, with no other order than the number of sheets the work is intended to make, by following the

above mode he will be enabled pretty accurately to give his directions—but as it is necessary, on a subject like the present, to be as clear as possible, the following remarks will exemplify what has been laid down. Take the number of words in a line of manuscript at 20, the lines in a page at 50; we multiply 50 by 20, which will produce 1,000 words in a page; we then multiply 1,000 by 422, which are supposed to be the number of folios in the manuscript, and we shall find it contain 422,000 words.—The work being printed in pica 8vo., 20 m's measure, and each line containing 10 words, each page 40 lines—the case will stand thus:

<i>Manuscript.</i>		<i>Printed.</i>
$50 \times 20 \times 422 = 422,000$		$40 \times 10 \times 1,055 = 422,000$

Having ascertained the number of sheets the work will make, and that number being sufficient for two volumes, they are divided accordingly. But should the author wish to have his work comprised in one volume, it is requisite to be prepared with the sized type and measure which may accord with his inclination. By referring to the scale of proportions, and placing the brevier by the side of the pica body, we find that a page will contain sixty-two lines instead of forty, and the same difference in the width, which will be one-half more than the former calculation. We therefore multiply 62 by 15 words in a line, one-half added to the 10 in pica, which will give 930 words in a page; multiply that by 454, it will produce 422,220 words; 454 will therefore be the last folio, should the volume be printed in brevier, which will be 28 sheets and six pages.—In works that are to be leaded, the calculation must be made according to the thickness of the lead in the house in which the work is to be printed, as they are apt to vary; though in general three leads go to a brevier; therefore in works similar to the foregoing we should add one-third for leads, which will drive it out to 604 pages, or 37 sheets, 12 pages, which is more than a volume generally contains; if it should be thought too much, the measure may be widened and the page lengthened.

THE DEPARTMENT OF A READER.

WHEN it is considered how much the credit of our art, and the general interest of literature depend on the grammatical accuracy and typographical correctness of our labours, it will readily appear that a careful and steady *Reader* must be indispensable in every printing-office. It is always desirable that a reader should have been brought up a compositor. By his practical acquaintance with the mechanical department of the business, he will be better able to detect those manifold errata which, unperceived by the mere man of learning and science, lie lurking, as it were, in a thousand different forms, in every sheet; and, if overlooked, evince a carelessness and inattention to our labours, that must always offend the just taste and professional discernment of all true lovers of correct and beautiful typography. Some of the principal imperfections which are most easily observed by the man of practical knowledge in the art of printing, are the following: viz. imperfect and wrong-founded, or inverted letters, particularly the lower-case *s*, the *n*, and the *u*; awkward and irregular spacing; uneven pages or columns; a false disposition of the reference marks; crookedness in words and lines; bad making-up of matter;

erroneous indention, &c. These *minutiae*, which are rather imperfections of workmanship, than literal errors, are apt to be overlooked and neglected by those readers who have no idea of the liability there is, even with the most careful compositor, occasionally to fall into them. Long and frequent habits of reading proof-sheets for the press, a quick eye, and a steady mind, will certainly enable a person, though not a compositor, to detect those minor deviations from correctness, which the inexperienced and careless are apt to overlook. But while these habits are acquiring, without which no person can be safely entrusted to read a sheet for press, the labours of the printer are liable to go forth into the world in a manner that will reflect discredit on the employed, and give offence to the employer. A reader ought to be well versed in all the peculiarities of the English tongue—its idioms, its true genius, and singular adaptation to that variety of expression in which we embody our thoughts, and pourtray the human intellect. Instances will frequently occur, particularly in large printing offices, where a knowledge of this nature and extent will be almost indispensable. Many, even of our first-rate authors, are too apt, in the warmth of discussion, the flights of speculation, and the laborious exercise of the thinking powers, to pass over, unobserved, those deviations from pure diction and strict grammatical accuracy, which they have imperceptibly acquired the habit of falling into, by their ordinary conversation with mankind. Now although no corrector of the press can strictly be required to do otherwise than to *follow his copy*, that is, faithfully to adhere to the original, with all its defects, yet every one must perceive, that it would often be performing a friendly, and perhaps a charitable service, to point out, in proper time, imperfections and mistakes which have escaped the observation of a quick or voluminous writer. This remark will however chiefly apply to inaccurate orthography, and glaring instances of erroneous syntax. With the spirit, the opinions, the whims of an author, no corrector of the press has any business to interfere. Some writers, after all the labours of the printer, and the skill of the reader, are doomed to make their appearance before the world with many “imperfections on their heads,” are condemned to bear the contumely, and face the broad eye of an unrelenting critic.

Nothing can be more vexatious to an author, than to see the words *honour*, *favour*, &c. spelt with, and without the *u*. This is a discrepancy which correctors ought studiously to avoid. The above observations equally apply to the capitalizing of noun-substantives, &c. in one place, and the omission of them in another.

Having made a slight comparison of the copy and the proof, the reader calls the reading-boy to read the copy aloud to him. The eye of the reader should not follow, but rather precede the voice of the boy; accustomed to this mode he will be able to anticipate every single word in the copy.

After the proof has been read with the reading-boy, the signatures, catch-words, headlines, titles, and folios of each page, should be most carefully examined; and the number, (if more than one) of the volume, signature, and *prima* of the ensuing sheet, accurately marked on the margin of the copy, and a crotchet made between the last word of that and the first of the next sheet, in order that the compositor, should he not have composed beyond the sheet, may know where to begin, without having the trouble of referring, either to the proof or the form, and the reader will be certain that the commencement is right when he gets the succeeding sheet—this prevents much trouble to the reader and compositor.

OCTAVO.											
15	28 13440	29 13920	30 14400	31 14880	32 15360	25	48 38400	49 39200	50 40000	51 40800	52 41600
15½	29 14384	30 14880	31 15376	32 15872	33 16368	25½	49 39984	50 40800	51 41616	52 42432	53 43248
16	30 15360	31 15872	32 16384	33 16896	34 17408	26	50 41600	51 42432	52 43264	53 44096	54 44928
16½	31 16368	32 16896	33 17424	34 17952	35 18480	26½	51 43248	52 44096	53 44944	54 45792	55 46640
17	32 17408	33 17952	34 18496	35 19040	36 19584	27	52 44928	53 45792	54 46656	55 47520	56 48380
17½	33 18480	34 19040	35 19600	36 20160	37 20720	27½	53 46640	54 47520	55 48400	56 49280	57 50160
18	34 19584	35 20160	36 20736	37 21312	38 21888	28	54 48384	55 49280	56 50176	57 51072	58 51968
18½	35 20720	36 21312	37 21904	38 22496	39 23088	28½	55 50160	56 51072	57 51984	58 52896	59 53808
19	36 21888	37 22496	38 23104	39 24712	40 24320	29	56 51968	57 52896	58 53824	59 54752	60 55680
19½	37 23088	38 23712	39 24336	40 24960	41 25584	29½	57 53808	58 54752	59 55696	60 56640	61 57584
20	38 24320	39 24960	40 25600	41 26240	42 26880	30	58 55680	59 56640	60 57600	61 58560	62 59520
20½	39 25584	40 26240	41 26896	42 27552	43 28208	30½	59 57584	60 58560	61 59536	62 60512	63 61488
21	40 26880	41 27552	42 28224	43 28896	44 29568	31	60 59520	61 60512	62 61504	63 62496	64 63488
21½	41 28208	42 28896	43 29584	44 30272	45 30960	31½	61 61488	62 62496	63 63504	64 64512	65 65520
22	42 29568	43 30272	44 30976	45 31680	46 32384	32	62 63488	63 64512	64 65536	65 66560	66 67584
22½	43 30960	44 31680	45 32400	46 33120	47 33850	32½	63 65520	64 66560	65 67600	66 68640	67 69680
23	44 32384	45 33120	46 33856	47 34592	48 35328	33	64 67584	65 68640	66 69696	67 70752	68 71808
23½	45 33840	46 34592	47 35344	48 36096	49 36848	33½	65 69680	66 70752	67 71824	68 72896	69 73968
24	46 35328	47 36096	48 36864	49 37632	50 38400	34	66 71808	67 72896	68 73948	69 75072	70 76160
24½	47 36848	48 37632	49 38416	50 39200	51 39984	34½	67 73968	68 75072	69 76176	70 77280	71 78384

These Tables contain calculations of the number of letters, as cast up by the following rule. The figures in the first and seventh columns and the upper ones, show the width and length, the lower ones the number of letters in the sheet. *Ex.* Octavo—28 multiplied by 15 make 13440.

DUODECIMO.

13	20 12480	21 13104	22 13728	23 14352	24 14976	23	40 44160	41 45264	42 46368	43 47472	44 48576
13½	21 13608	22 14256	23 14904	24 15552	25 16200	23½	41 46248	42 47376	43 48504	44 49632	45 50760
14	22 14784	23 15456	24 16128	25 16800	26 17472	24	42 48384	43 49536	44 50688	45 51840	46 52992
14½	23 16008	24 16704	25 17400	26 18096	27 18792	24½	43 50568	44 51744	45 52920	46 54096	47 55272
15	24 17280	25 18000	26 18720	27 19440	28 20160	25	44 52800	45 54000	46 55200	47 56400	48 57600
15½	25 18600	26 19344	27 20088	28 20832	29 21576	25½	45 55080	46 56304	47 57528	48 58752	49 59976
16	26 19968	27 20736	28 21504	29 22272	30 23040	26	46 57408	47 58656	48 59904	49 61152	50 62400
16½	27 21384	28 22176	29 22968	30 23760	31 24552	26½	47 59784	48 61056	49 62328	50 63600	51 64872
17	28 22848	29 23664	30 24480	31 25296	32 26112	27	48 62208	49 63504	50 64800	51 66096	52 67392
17½	29 24360	30 25200	31 26040	32 26880	33 27720	27½	49 64680	50 66000	51 67320	52 68640	53 69960
18	30 25920	31 26784	32 27648	33 28512	34 29376	28	50 67200	51 68544	52 69888	53 71232	54 72576
18½	31 27528	32 28416	33 29304	34 30192	35 31080	28½	51 69768	52 71136	53 72504	54 73872	55 75240
19	32 29184	33 30096	34 31008	35 31920	36 32832	29	52 72384	53 73776	54 75168	55 76560	56 77952
19½	33 30888	34 31824	35 32760	36 33696	37 34632	29½	53 75048	54 76464	55 77880	56 79296	57 80712
20	34 32640	35 33600	36 34560	37 35520	38 36480	30	54 77760	55 79200	56 80640	57 82080	58 83520
20½	35 34440	36 35424	37 36408	38 37392	39 38376	30½	55 80520	56 81984	57 83448	58 84912	59 86376
21	36 36288	37 37296	38 38304	39 39312	40 40320	31	56 83328	57 84816	58 86304	59 87792	60 89280
21½	37 38184	38 39216	39 40248	40 41280	41 42312	31½	57 86184	58 87696	59 89208	60 90720	61 92232
22	38 40128	39 41184	40 42240	41 43296	42 44352	32	58 89088	59 90624	60 92160	61 93696	62 95232
22½	39 42120	40 43200	41 44280	42 45360	43 46440	32½	59 92040	60 93600	61 95160	62 96720	63 98280

EIGHTEENS.

To find the letters in a sheet of Eighteens, take the measures of the Twelves, divide by 2, and add the product. Ex. Multiply 13 by 20, &c.

2)12480
6240
18720

COMPOSITORS' SCALE OF PRICES.

IN the early stages of the printing business the mode of paying the workmen employed in it must have been similar to those of every other business or manufactory in its infancy; viz. on established daily wages. The idea of paying as for piece-work was not suggested for nearly two centuries after the discovery of the art.

It is now the practice to pay the composition work by a calculation of the number of thousand letters which the compositor has to pick up: this is calculated by taking the width and length of the page in the letter m of the type in which it is set; assuming that the average width of each type is half an m, or an n, the measure (or width of the page) is doubled, and then multiplied by the m's in length; as for example:—Suppose the page is 26 m's wide, and 50 m's long.

$$\begin{array}{r}
 \text{multiplied by } 26 \\
 \hline
 \text{gives } 52 \text{ n's wide} \\
 \text{multiplied by } 50 \text{ m's long} \\
 \hline
 \text{gives } 2600 \text{ letters in a page} \\
 \text{multiplied by } 16 \text{ pages in a sheet} \\
 \hline
 15600 \\
 2600 \\
 \hline
 \end{array}$$

Total 41600 letters in a sheet, which (see Article 1. of the scale,) count as 42 thousands; and this, if manuscript leaded, is $5\frac{1}{4}$ d. equal £1 0s. 1½d: this counts as £1.

This may vary in price per 1000, according to circumstances explained in the rules.

The charge cannot always be calculated by merely the number of lines appearing upon paper, because if space lines, or leads, are used, they form a part of the measure of length; therefore, the m's are laid down the side of the page, and the length thus correctly ascertained.

A Table showing the Price of any Number of Letters, from 16,000 to 100,000, at 5d. per Thousand.

Th	s.	d.	Th	s.	d.	Th	s.	d.	Th	s.	d.	Th	s.	d.
17	7	1	34	14	2	51	21	3	68	28	4	85	35	5
18	7	6	35	14	7	52	21	8	69	28	9	86	35	10
19	7	11	36	15	0	53	22	1	70	29	2	87	36	3
20	8	4	37	15	5	54	22	6	71	29	7	88	36	8
21	8	9	38	15	10	55	22	11	72	30	0	89	37	1
22	9	2	39	16	3	56	23	4	73	30	5	90	37	6
23	9	7	40	16	8	57	23	9	74	30	10	91	37	11
24	10	0	41	17	1	58	24	2	75	31	3	92	38	4
25	10	5	42	17	6	59	24	7	76	31	8	93	38	9
26	10	10	43	17	11	60	25	0	77	32	1	94	39	2
27	11	3	44	18	4	61	25	5	78	32	6	95	39	7
28	11	8	45	18	9	62	25	10	79	32	11	96	40	0
29	12	1	46	19	2	63	26	3	80	33	4	97	40	5
30	12	6	47	19	7	64	26	8	81	33	9	98	40	10
31	12	11	48	20	0	65	27	1	82	34	2	99	41	3
32	13	4	49	20	5	66	27	6	83	34	7	100	41	8
33	13	9	50	20	10	67	27	11	84	35	0			

A Table showing the Price of any Number of Letters, from 16,000 to 100,000, at 5½d. 5½d. 5¾d. 6d. 6½d. 7d. 7½d. and 8d. per Thousand.

Th	5½d.		5½d.		5¾d.		6d.		6½d.		7d.		7½d.		8d.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
17	7	5	7	9	8	1	8	6	8	10	9	11	10	7	11	4
18	7	10	8	3	8	7	9	0	9	4	10	6	11	3	12	0
19	8	3	8	8	9	1	9	6	9	10	11	1	11	10	12	8
20	8	9	9	2	9	7	10	0	10	5	11	8	12	6	13	4
21	9	2	9	7	10	0	10	6	10	11	12	3	13	1	14	0
22	9	7	10	1	10	6	11	0	11	5	12	10	13	9	14	8
23	10	0	10	6	11	0	11	6	11	11	13	5	14	4	15	4
24	10	6	11	0	11	6	12	0	12	6	14	0	15	0	16	0
25	10	11	11	5	11	11	12	6	13	0	14	7	15	7	16	8
26	11	4	11	11	12	5	13	0	13	6	15	2	16	3	17	4
27	11	9	12	4	12	11	13	6	14	0	15	9	16	10	18	0
28	12	3	12	10	13	5	14	0	14	7	16	4	17	6	18	8
29	12	8	13	3	13	10	14	6	15	1	16	11	18	1	19	4
30	13	1	13	9	14	4	15	0	15	7	17	6	18	9	20	0
31	13	6	14	2	14	10	15	6	16	1	18	1	19	4	20	8
32	14	0	14	8	15	4	16	0	16	8	18	8	20	0	21	4
33	14	5	15	1	15	9	16	6	17	2	19	3	20	7	22	0
34	14	10	15	7	16	3	17	0	17	8	19	10	21	3	22	8
35	15	3	16	0	16	9	17	6	18	2	20	5	21	10	23	4
36	15	9	16	6	17	3	18	0	18	9	21	0	22	6	24	0
37	16	2	16	11	17	8	18	6	19	3	21	7	23	1	24	8
38	16	7	17	5	18	2	19	0	19	9	22	2	23	9	25	4
39	17	0	17	10	18	8	19	6	20	3	22	9	24	4	26	0
40	17	6	18	4	19	2	20	0	20	10	23	4	25	0	26	8
41	17	11	18	9	19	7	20	6	21	4	23	11	25	7	27	4
42	18	4	19	3	20	1	21	0	21	10	24	6	26	3	28	0
43	18	9	19	8	20	7	21	6	22	4	25	1	26	10	28	8
44	19	3	20	2	21	1	22	0	22	11	25	8	27	6	29	4
45	19	8	20	7	21	6	22	6	23	5	26	3	28	1	30	0
46	20	1	21	1	22	0	23	0	23	11	26	10	28	9	30	8
47	20	6	21	6	22	6	23	6	24	5	27	5	29	4	31	4
48	21	0	22	0	23	0	24	0	25	0	28	0	30	0	32	0
49	21	5	22	5	23	5	24	6	25	6	28	7	30	7	32	8
50	21	10	22	11	23	11	25	0	26	0	29	2	31	3	33	4
51	22	3	23	4	24	5	25	6	26	6	29	9	31	10	34	0
52	22	9	23	10	24	11	26	0	27	1	30	4	32	6	34	8
53	23	2	24	3	25	4	26	6	27	7	30	11	33	1	35	4
54	23	7	24	9	25	10	27	0	28	1	31	6	33	9	36	0
55	24	0	25	2	26	4	27	6	28	7	32	1	34	4	36	8
56	24	6	25	8	26	10	28	0	29	2	32	8	35	0	37	4
57	24	11	26	1	27	3	28	6	29	8	33	3	35	7	38	0
58	25	4	26	7	27	9	29	0	30	2	33	10	36	3	38	8
59	25	9	27	0	28	3	29	6	30	8	34	5	36	10	39	4
60	26	3	27	6	28	9	30	0	31	3	35	0	37	6	40	0
61	26	8	27	11	29	2	30	6	31	9	35	7	38	1	40	8
62	27	1	28	5	29	8	31	0	32	3	36	2	38	9	41	4
63	27	6	28	10	30	2	31	6	32	9	36	9	39	4	42	0
64	28	0	29	4	30	8	32	0	33	4	37	4	40	0	42	8
65	28	5	29	9	31	1	32	6	33	10	37	11	40	7	43	4
66	28	10	30	3	31	7	33	0	34	4	38	6	41	3	44	0
67	29	3	30	8	32	1	33	6	34	10	39	1	41	10	44	8
68	29	9	31	2	32	7	34	0	35	5	39	8	42	6	45	4
69	30	2	31	7	33	0	34	6	35	11	40	3	43	1	46	0
70	30	7	32	1	33	6	35	0	36	5	40	10	43	9	46	8
71	31	0	32	6	34	0	35	6	36	11	41	5	44	4	47	4
72	31	6	33	0	34	6	36	0	37	6	42	0	45	0	48	0

Th	$5\frac{1}{4}d.$		$5\frac{1}{2}d.$		$5\frac{3}{4}d.$		6d.		$6\frac{1}{4}d.$		7d.		$7\frac{1}{2}d.$		8d.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
73	31	11	33	5	34	11	36	6	38	0	42	7	45	7	48	8
74	32	4	33	11	35	5	37	0	38	6	43	2	46	3	49	4
75	32	9	34	4	35	11	37	6	39	0	43	9	46	10	50	0
76	33	3	34	10	36	5	38	0	39	7	44	4	47	6	50	8
77	33	8	35	3	36	10	38	6	40	1	44	11	48	1	51	4
78	34	1	35	9	37	4	39	0	40	7	45	6	48	9	52	0
79	34	6	36	2	37	10	39	6	41	1	46	1	49	4	52	8
80	35	0	36	8	38	4	40	0	41	8	46	8	50	0	53	4
81	35	5	37	1	38	9	40	6	42	2	47	3	50	7	54	0
82	35	10	37	7	39	3	41	0	42	8	47	10	51	3	54	8
83	36	3	38	0	39	9	41	6	43	2	48	5	51	10	55	4
84	36	9	38	6	40	3	42	0	43	9	49	0	52	6	56	0
85	37	2	38	11	40	8	42	6	44	3	49	7	53	1	56	8
86	37	7	39	5	41	2	43	0	44	9	50	2	53	9	57	4
87	38	0	39	10	41	8	43	6	45	3	50	9	54	4	58	0
88	38	6	40	4	42	2	44	0	45	10	51	4	55	0	58	8
89	38	11	40	9	42	7	44	6	46	4	51	11	55	7	59	4
90	39	4	41	3	43	1	45	0	46	10	52	6	56	3	60	0
91	39	9	41	8	43	7	45	6	47	4	53	1	56	10	60	8
92	40	3	42	2	44	1	46	0	47	11	53	8	57	6	61	4
93	40	8	42	7	44	6	46	6	48	5	54	3	58	1	62	0
94	41	1	43	1	45	0	47	0	48	11	54	10	58	9	62	8
95	41	6	43	6	45	6	47	6	49	5	55	5	59	4	63	4
96	42	0	44	0	46	0	48	0	50	0	56	0	60	0	64	0
97	42	5	44	5	46	5	48	6	50	6	56	7	60	7	64	8
98	42	10	44	11	46	11	49	0	51	0	57	2	61	3	65	4
99	43	3	45	4	47	5	49	6	51	6	57	9	61	10	66	0
100	43	9	45	10	47	11	50	0	52	1	58	4	62	6	66	8

As the fractional parts of pence are not reckoned in the payment, they are omitted in the above prices.

SCALE OF PRICES FOR COMPOSITORS' WORK,

Agreed upon at a General Meeting of Master Printers, held at Stationers' Hall, April 16, 1810; and altered as to Reprints, in 1816.

ARTICLE 1. All works in the English language, common matter, *with space lines*, including English and Brevier, to be cast up at fivepence three farthings per thousand; if in Minion, sixpence; in Nonpareil, sixpence three farthings. *Without space lines*, including English and Brevier, sixpence per thousand; in Minion, sixpence farthing; in Nonpareil, sevenpence; in Pearl, *with or without space lines*, eightpence; heads and directions, or signature lines, included. A thick space to be considered as an *n* in the width, and an *n* to be reckoned an *m* in the length of the page: and where the number of letters amounts to five hundred, a thousand to be charged; if under five hundred, not to be reckoned: and if the calculation at per thousand shall not amount to an odd threepence, the odd pence to be suppressed in the price of the work; but where it amounts to or exceeds threepence, there shall be sixpence charged. *M* and *n* quadrats, or whatever is used at the beginning or end of lines, to be reckoned as an *m* in the width.

2. Works printed in Great Primer to be cast up as English; and all works in larger type than Great Primer, as half English and half Great Primer.

3. All works in foreign languages, though common type, *with space lines*, including English and Brevier, to be cast up at sixpence farthing per thousand; if in Minion, sixpence three farthings; Nonpareil, sevenpence halfpenny. *Without space lines*, including English and Brevier, sixpence halfpenny; Minion, sevenpence; Nonpareil, sevenpence three farthings; and Pearl, *with or without space lines*, eightpence three farthings.

4. English Dictionaries of every size, *with space lines*, including English and Brevier, to be paid sixpence farthing; *without space lines*, sixpence halfpenny. (In this article are not included Gazetteers, Geographical Dictionaries, Dictionaries of Arts and Sciences, and works of a similar description, except those attended with extra trouble beyond usual descriptive matter.) Dictionaries of two or more languages, of every size, *with space lines*, including English and Brevier, to be paid sixpence halfpenny: *without space lines*, sixpence three farthings; if smaller type than Brevier, to take the proportionate advance specified in Article 1.

5. English Grammars, Spelling Books, and works of those descriptions, in Brevier or larger type, *with space lines*, to be paid sixpence per thousand; *without space lines*, sixpence farthing: if in two languages, or foreign language, *with space lines*, sixpence farthing; *without space lines*, sixpence halfpenny.

6. Small-sized Folios, Quartos, Octavos, and works done in Great Primer or larger type, (English language,) which do not come to seven shillings when cast up at the usual rate, to be paid as follows: English and larger type, not less than seven shillings; Pica, eight shillings and sixpence: English 12mo. to be paid not less than ten shillings and sixpence; and Pica not less than eleven shillings and sixpence per sheet.

7. Reviews, Magazines, and works of a similar description, consisting of various sized letter, if cast up to the different bodies, to be paid two shillings and sixpence per sheet extra.

8. Pamphlets of five sheets and under, and parts of works done in different houses, amounting to not more than five sheets, to be paid one shilling per sheet extra; but, as it frequently occurs that works exceeding a pamphlet are often nearly made up without a return of letter, all such works shall be considered as pamphlets, and paid for as such.

9. Works done in Sixteens, Eighteens, Twenty-fours, or Thirty-twos, on Small Pica and upwards, to be paid one shilling and sixpence per sheet extra. If on Long Primer or smaller type, one shilling per sheet extra. Forty-eights to be paid two shillings per sheet extra, and Sixty-fours two shillings and sixpence per sheet extra.

10. Works requiring an alteration or alterations of margin, to be paid, for each alteration, one shilling per sheet to the Pressmen if altered by them, and sixpence to the Compositor, as a compensation for making up the furniture; if altered by the Compositor, then he is to be paid one shilling for the alteration, and the Pressmen sixpence for the delay.

This article to be determined on solely at the option of the employer.

11. Bottom Notes consisting of twenty lines (or two notes, though not amounting to twenty lines) and not exceeding four pages, in every ten sheets, in Quarto or Octavo;—one page, (or two notes, though not amounting to one page) and not exceeding six pages, in Twelves: two pages (or two notes, though not amounting to two pages) and not exceeding eight, in Eighteens or above, to be paid one shilling per sheet; but under the above proportion no charge to be made. Bottom Notes, consisting of ten lines (or two notes, though not amounting to ten lines) in a pamphlet of five sheets or under, and not

exceeding two pages, to be paid one shilling per sheet extra. Quotations, Mottos, Contents or Chapters, &c. in smaller type than the body, to be considered as Notes. [Where the Notes shall be in Nonpareil or Pearl, in Twelves, the number of pages to be restricted to four; in eighteens to five pages.]

This article is intended only to fix what constitutes the charge of one shilling per sheet for Bottom Notes: all works requiring a higher charge than one shilling for Bottom Notes, are to be paid for according to their value.

12. Side Notes to Folios and Quartos not exceeding a broad quotation, if only chap. or date, and not exceeding three explanatory lines on an average in each page, to be paid one shilling per sheet; in Octavo, if only chap. or date, and not exceeding three explanatory lines on an average in each page, one shilling and sixpence per sheet. Cut-in Notes, in smaller type than the body, to be paid for in a similar manner.

Side and Bottom Notes to many, particularly historical and law works, if attended with more than ordinary trouble, to be settled between the employer and journeyman.

13. Greek, Hebrew, Saxon, &c. or any of the dead characters, if one word and not exceeding three lines in any one sheet, to be paid for that sheet one shilling extra; all above to be paid according to their value.

14. Greek with space lines, and without accents, to be paid eightpence halfpenny per thousand; if with separate accents tenpence: without space lines, and without accents, eightpence three farthings; with accents, tenpence farthing; the asper not to be considered an accent. [If Dictionary matter, to take one halfpenny advance.]

15. Hebrew, Arabic, Syriac, &c. to be paid double; Hebrew with points to be cast up as half body and half points doubled.

16. Music to be paid double the body of the sonnet type.

17. Index matter, though but one measure, to be paid two shillings per sheet extra.

18. Booksellers' Catalogues (in whatever language) to be cast up at sevenpence per thousand, not including the numbering.

19. Night work to commence and be paid for, from ten o'clock till twelve, one shilling; all after to be paid threepence per hour extra till six.—Morning work, commencing at four o'clock, to be paid one shilling extra.—Sunday work, if not exceeding six hours, to be paid for one shilling, if for a longer time, twopence an hour.

20. Jobs of one sheet or under (except Auctioneers' Catalogues and Particulars) to be cast up at sevenpence per thousand; if done in smaller type than Brevier, to take the proportionate advance specified in Article 1; if in foreign language of one sheet or under, (except Auctioneers' Catalogues,) to be cast up at eightpence per thousand; if done in smaller type than Brevier, to take the proportionate advance specified in Article 1.

21. Where two pages only are imposed, either opposite to, or at the back of each other, they shall be paid for as two pages; but if with an indorse, or any other kind of matter, constituting a third, then to be paid as a sheet, if in Folio; a half-sheet, if in Quarto, and so on.

22. Broad-sides, such as Leases, Deeds, and Charter-parties, above the dimensions of crown, whether table or common matter, to be paid the double of common matter; on crown and under, to be paid one and one half common matter.—The indorse to be paid one fourth of the inside page, as common matter.

23. All corrections to be paid sixpence per hour.
24. The Imprint to be considered as two lines in the square of the page.
25. Different volumes of the same work to be paid for distiuctly, according to value.

According to the alteration of 1816, all reprinted works to be paid three farthings per thousand less than the scale of 1810.

The following Scale, with the remarks, was taken from a well digested Report of the Committee of News Compositors, which was read July 20, 1820.

ABSTRACT OF THE SCALE.

Morning Papers, £2 8s. 0d. P week; 3s. 10d. P galley; $11\frac{1}{2}d.$ P hour.
Evening Papers, £2 3s. 6d. P week; 3s. 7d. P galley; $10\frac{1}{2}d.$ P hour.

Assistants on other journals are paid the same as Evening papers; the Sunday papers, having their galleys of various lengths, are paid at the rate of $8\frac{1}{2}d.$ per thousand, or $10d.$ per hour.

Long Primer and Minion galleys, cast as nigh 5,000 letters as possible (at present varying from that number to 5,200, partly arising from a variation in the founders' standards) are per thousand, on

Long Primer and Minion...	9d. morning.....	$8\frac{1}{2}d.$ evening.
Nonpareil	10d. morning.....	$9\frac{1}{2}d.$ evening.
Pearl.....	11d. morning.....	$10\frac{1}{2}d.$ evening.

Or a reduction, in proportion to value, on the galley quantity.

The galley on Morning papers consists of 120 lines Long Primer, and 40 *after lines*; Minion 88, and 30 *after lines*; on papers 22 ems Long Primer wide: other widths in proportion; and a *finish* of five hours. Another *mode* is, one galley and a *finish* of six hours. Twelve hours on and twelve off (including refreshment time), was the original agreement.

The *time* of beginning to be the same uniformly as agreed upon by the Printer and Companionship, *i. e.* either a two, three, or four o'clock paper; and at whatever hour the journal goes to press one morning, regulates the hour of commencing work for the next day's publication, provided it should be over the hour originally agreed upon: if under, the time is in the compositors' favour. The hour of commencing work on Sunday is regulated by the time of finishing on Saturday morning.

Ten hours' composition is the specified time for Evening papers. All composition to cease when the day's publication goes to press; any work required afterwards to be paid for extra, or deducted from the first work of the next publication. This does not apply to *Second Editions*; they being connected solely with the antecedent paper, must be paid for extra. Newspapers in a foreign language take, of course, the same advance as is allowed on book-work.

A system termed *Finishing* having been formerly introduced, it is necessary to state, that no mode of working can be considered fair (except as before-stated), otherwise than by the galley or hour.—N.B. No Apprentices to be employed on Daily papers.

ABSTRACT OF THE COMPOSITORS' SCALE.

		COMMON	FOREIGN	DICTIONARIES.		GRAMMARS, &c.		GREEK.	
				English.	Languages or Foreign.	English.	Languages or Foreign.	Without Accents.	With Accents.
<i>English to Brevier ...</i>	{ lead	5 $\frac{3}{4}$ d.	6 $\frac{1}{4}$ d.	6 $\frac{1}{4}$ d.	6 $\frac{1}{2}$ d.	6d.	6 $\frac{1}{4}$ d.	8 $\frac{1}{2}$ d.	10d.
	{ solid	6	6 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{3}{4}$	6 $\frac{1}{4}$	6 $\frac{1}{2}$	8 $\frac{3}{4}$	10 $\frac{1}{4}$
<i>Minion</i>	{ lead	6	6 $\frac{3}{4}$	6 $\frac{3}{4}$	7				
	{ solid	6 $\frac{1}{4}$	7	7	7 $\frac{1}{4}$				
<i>Nonpar.</i>	{ lead	6 $\frac{3}{4}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{3}{4}$				
	{ solid	7	7 $\frac{1}{4}$	7 $\frac{3}{4}$	8				
<i>Pearl</i>	{ lead. or }	8	8 $\frac{1}{4}$	8 $\frac{1}{4}$	9				
	{ solid ... }								

NOTES constituting the Charge of One Shilling per Sheet.—See Article 11.

Quarto and Octavo... 20 lines, or 2 notes, and not exceeding 4 pages in 10 sheets.
Twelves 1 page, or 2 notes, and not exceeding 6 pages in 10 sheets.
Eighteens or above... 2 pages, or 2 notes, and not exceeding 8 pages in 10 sheets.
Pamphlets 10 lines, or 2 notes, and not exceeding 2 pages in 5 sheets.

Parliamentary work is paid upon a scale somewhat higher than the above, upon account of the hurry and exertion required; and that is again divided into *Private Parliamentary Work* and *Public Parliamentary Work*: the former being at sevenpence per thousand, the latter at sixpence-halfpenny.

It would be desirable a regular scale should be drawn up for the payment of job work, as most towns vary in the rate of wages so they often vary in the price of jobbing; the following scale may be considered a fair criterion to follow:

Double Demy Broadside, 8s.—double crown ditto, 7s.—double foolscap and post ditto, 6s. If set up at twice, to be paid for accordingly. Royal broadsides, 6s. 6d.—folio, 4s. quarto, 2s. 3d.—sixes and eights, 1s. 6d.—nines and twelves, 1s.—demy broadsides, 5s. 6d.—folio, 3s. 6d.—quarto, 1s. 9d.—sixes, 1s. 3d.—eights, nines, and twelves, 1s.—crown and post broadsides, 4s.—folio, 2s. 6d.—quarto, 1s. 3d.—sixes and eights, 1s.—foolscap and pot broadsides, 3s. 6d.—folio, 2s.—quarto, 1s.—sixes and eights, 9d. All way bills and headings to be paid for according to value. All bills, if solid matter, set up in less type than English, to be paid for per thousand. Quarto circulars, common type, 1s. 6d.—script ditto, 1s. 9d.—octavo ditto common type, 1s.—script ditto, 1s. 3d. If in less type than pica to be cast up. Small cards, 6d.—large ditto, 1s.—with borders, 6d. additional. Invoice heads on post or foolscap, 9d.—ditto with date, £. s. d. and columns, 1s.—ditto folio, 2s.—ditto quarto, 1s. 6d.

All jobbing offices on the establishment work twelve hours, inclusive of two for meals; sixpence per hour for overtime; night work to commence at ten o'clock, and to be paid one shilling extra; morning work, if before five o'clock, to be paid one shilling extra. When any job is of an intricate nature, and cannot be governed by the above rules, the price of the work to be settled between the employer and the employed.

OF CASES AND FRAME.

AN upper case and a lower case, together, make what is technically called "a pair of cases." They are each made similar as to length, breadth, and depth; viz. 2 feet 8½ inches long—1 foot 2½ inches wide—and, generally, 1½ inch deep. The outer frame of each case is about three-quarters of an inch broad, in order that the ends of the several partitions which form the cells, and which are made of more slender strips of wood, may be let into its substance. The hithermost side is about half an inch higher than either of the other sides, so that when the galley, or another pair of cases are set upon them, they may rest against that higher ledge, and not slide off. Both the upper and lower cases have a partition, one inch broad, dove-tailed into the middle of the upper and under rail of the frame, to divide each case into two equal rectangles; and grooves are made on each side of it, to correspond with certain other grooves in each end, in order to admit the ends of those partitions which divide the cases lengthways: and the bottom board is well nailed to this partition as well as to the outer frame of the case. The pieces or strips of which the several cells are formed, are about the thickness of an English body. Each half of the whole length of the upper case is divided into seven equal parts; and its breadth containing also seven like divisions; the whole upper case is consequently divided into ninety-eight square boxes, whose areas are all equal to one another. But the two halves of the lower case are divided in length into eight equal parts, and its breadth into seven; but instead of the partitions being continued throughout, as in the upper cases, there are four several sizes of boxes, so arranged that the largest may be conveniently seated for the compositor's hand, because the European languages run most upon the particular letters to which the large boxes are appropriated. The number of boxes in the lower case is fifty-four, the arrangement of which will be at once exemplified by the schemes of cases; and the frontispiece will show the manner in which, when used, they are placed on.

FRAMES,

of which no further description than a reference to the frontispiece, will be necessary to enable any joiner to make one.

THE GALLEY

is a simple instrument made of three-eighths inch board, generally mahogany, with two elevated sides, not quite so high as quadrat height; their size varying for octavos, quartos, folios, &c.

THE IMPOSING STONE

is made of marble, Purbeck, York, Welsh slate, or any other stone that will take a flat and smooth face: the harder it is the better; and therefore marble, possessing this quality in a greater degree, and its pores being closer, is preferable to either of the others. It should be mounted upon a strong frame, and bedded with saw-dust, plaster, or paper; and its face should lie about 3 feet 2 inches above the floor. The frame under the stone is commonly fitted up with draw-boxes to contain quoins, reglet, furniture, leads, &c. &c. The usual size of the stone is 4 feet 8 inches, by 2 feet 3 inches; those dimensions being sufficient to hold a sheet of royal.

LETTER BOARDS

are of an oblong shape, 2 feet $2\frac{1}{2}$ inches long, by 1 foot 10 inches wide, and $1\frac{1}{4}$ inch thick, for demy,—for royal, 2 feet 4 inches long, by 2 feet wide. The upper side is planed very flat and smooth; and the under side is clamped with pieces about two inches square, dove-tailed into the board cross-ways, about four inches from each end, as well to keep it from warping as to bear it off the stone or bulk; or to admit of one board standing over another without touching the letter which may be upon the under ones.

FURNITURE, QUOINS, REGLET, SCALEBOARD, &c.

includes head-sticks, side and foot-sticks, gutters, back-sticks, reglets, quoins, &c. which are made with dry wainscot, quadrat high. The gage of the furniture is by quotations, beginning at narrow-quotation; then broad quotation; broad and pica; double narrow; double-broad; &c. &c. All below narrow-quotation is named by body of letter; as, two-line great primer; two-line english; english; and down to pearl; which is followed by scaleboard of two kinds, thick and thin. All furniture and reglets are supplied by the printer's joiner, in lengths of a yard each, by the dozen yards.

SIDE-STICKS

are the fixed wedges to lay against the sides and feet of the pages when they are about to be made fast in the chase. They are usually made with, from three-quarters to an inch, shoulders; the sharp angle is generally taken off from the bevelled ends: and both these and quoins are made to about quadrat height. The wear of side-sticks is so great from continual locking-up and unlocking, as to have induced the experiment of using metal ones. Brass has been tried for the purpose, but it proves too soft and expensive; and cast-iron is found too heavy. In order to obviate the main objection against the use of the latter metal, recourse has been had to grooving out the upper and under sides of the stick until the hollows nearly meet at the larger end, passing gradually towards each surface at the smaller point; the face, or that part which lies in contact with the type, being filed perfectly flat, they are found to answer many valuable purposes, and are calculated to save expense.

THE GUTTER,

which is made after the same principle, and still further lightened by two entire perforations of considerable length. It will be evident to those at all acquainted with the art, that the iron furniture can only be applied to works of a regular size: and perhaps it is to large demy octavos and royals that they are most particularly appropriate, as the wood, when used in works of this nature, will soon, by the immense pressure at one time, absorption of lye and water in washing and laying up, then lying loose to dry, imposing again, and going again and again through the same routine, cause a defect in register—in the running heads—in the sides of the pages, and in the exact parallelism of the lines—which can never happen in a judicious use of the metal furniture.

QUOINS.

THE wooden ones are still made use of; and, if they are properly used, no substitute is wanted. They are the moving wedges that fasten up the pages in a chase; and upon the

manner in which they are used, chiefly depends not only the safety, but also the fair and straight standing of the matter in a form. Their shape is irregular, having three of their sides truly squared, and the fourth slanted or bevelled to correspond with the degree of inclination or slope of the side-stick, when the shooting-stick is applied to the end to force them forward to a proper tightness.

CHASES.

A CHASE may be described as a rectangular iron frame, for containing the pages which form one side of the sheet. The usual size for demy is about 2 ft. 2 in. long, by 1 ft. 9 in. broad, the rim being three-quarters of an inch wide, by five-eighths of an inch deep, and set so flat as to bear equally upon the imposing-stone on all the sides and angles; the inside requires to be filed perfectly straight, square, and smooth. There are two cross-bars to every perfect chase, called the long and short crosses; the short-cross is about three-quarters of an inch in width; the long one, three-eighths of an inch. A dove-tail, filed away upon a bevil, from the under to the upper side, forms each end of these crosses, so as to make the under side of each dove-tail narrower than the upper side. These dove-tails are fitted into four dove-tail mortices filed in the rim, each of which divides its side into two equal parts upon the inside; and each is made wider on the upper side than on the under, so as to fit the corresponding dove-tails of the crosses, and prevent them from falling through to the lower side. Similar mortices are also made about $2\frac{1}{2}$ inches from those in the long sides of the chase; and also $2\frac{1}{2}$ inches from those in the short sides—the former for shifting the short cross for imposing twelves; and the latter for shifting the long cross for imposing eighteens. As the crosses when placed in the frame must intersect each other in which position soever they are put, one is lapped into the other by notches filed half through each, at such points as correspond to the mortices in the rim, and so that they may stand precisely at right angles one to another, at either place of intersection. In the middle, between the two edges of the upper side of the short cross, are made two grooves, parallel to the sides, beginning at about two inches from each end, and extending to about five inches in length towards the middle of the bar; which grooves are about a quarter of an inch wide, and about three-eighths deep; and are made to receive the points from the tympan.

Chases made purposely for broadsides have no crosses or dove-tail cuts, but must be broader in the rim to give all the resistance possible to the locking up. For a work of unusual dimensions, where it is necessary to contrive every possible means for gaining room even upon a double-demy press, a plan has been devised for saving both the space, weight, and expense of side and foot sticks (which for such a purpose must have been made of iron), by forming a chase having two sides of irregular angles, the other two being at right angles, so placing only a reglet for the quoins to run against; the irregular sides of the chase forming the inclined planes to give the pressure against the type.

THE SHOOTING-STICK

is commonly made of box wood, but well-seasoned holly is preferable, besides being cheaper, and more easily obtained.

THE HEBREW ALPHABET.

Aleph
Beth
Gimel
Daleth
He
Vau
Zain
Cheth
Teth
Jod

Caph
Lamed
Mem
Nun
Samech
Ain
Phe
Tzaddi
Koph
Resch
Shin, or Sin
Thau

Final Letters.

The following five letters are cast broad, and are used at the end of words, viz.

Aleph He Lamed
Mem Thau

but are not counted among the final letters, being contrived for justifying, because Hebrew is not divided.

HEBREW UPPER CASE.

א	ב	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ
נ	ס	פ	צ	ק	ר	ש	ש	ש	ט	י	כ	ל	מ
מ	מ	ש	נ	פ	פ	פ	פ	פ	פ	פ	פ	פ	פ
פ	צ	ש	צ	ק	ק	ק	ק	ק	ק	ק	ק	ק	ק
ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר
ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה

HEBREW LOWER CASE.

4-m Quads.	א	ב	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ
3-m Quads.	נ	ס	פ	צ	ק	ר	ש	ש	ש	ט	י	כ	ל	מ
2-m Quads.	מ	מ	ש	נ	פ	פ	פ	פ	פ	פ	פ	פ	פ	פ
1-m Quads.	פ	צ	ש	צ	ק	ק	ק	ק	ק	ק	ק	ק	ק	ק
n Quads.	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר	ר
Hair Spaces	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה	ה
Spaces	א	ב	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ

THE GREEK ALPHABET.

A	α	Alpha	a	N	ν	Nu	n
B	β	Beta	b	Ξ	ξ	Xi	x
Γ	γ	Gamma	g	O	$\omicron$	Omicron	o short
Δ	δ	Delta	d	Π	π	Pi	p
E	ϵ	Epsilon	e short	P	ρ	Rho	r
Z	ζ	Zeta	z	Σ	σ	Sigma	s
H	η	Eta	e long	T	τ	Tau	t
Θ	θ	Theta	th	Υ	υ	Upsilon	u
I	ι	Iota	i	Φ	ϕ	Phi	ph
K	κ	Kappa	k c	X	χ	Chi	ch
Λ	λ	Lambda	l	Ψ	ψ	Psi	ps
M	μ	Mu	m	Ω	ω	Omega	o long

GREEK UPPER CASE.

A	B	Γ	Δ	E	Z	H
Θ	I	K	Λ	M	N	Ξ
O	Π	P	Σ	T	Υ	Φ
X	Ψ	Ω	ϣ	φ	η	ω
s	kern.	kern.	kern.	kern.	kern	kern
α	η	ω	φ	η	ω	
ά	ή	ώ	φ	ή	ώ	
ι	υ	ε	ο	υ	..	ι

GREEK LOWER CASE.

kern. α	kern. η	kern. υ	kern. ω	kern. ϑ	kern. γ	Thin Spaces	σ	s	ψ	$\dot{\rho}$	$\dot{\rho}'$	
β	ϵ	γ		δ		ϵ	ι	η	ζ	θ	ϕ	χ
κ		λ		μ		ν	$\omicron$	π	,	ς	n quadrats	m quadrats
ξ	ζ	υ		τ		spaces	α	ω	$\dot{\rho}$.	$\dot{\rho}'$ -	Quadrats	

THE DUTY OF AN OVERSEER.

THOSE persons whose ability or ambition induces them to aspire to the attainment of this most important situation, should be endowed with something more than an ordinary capacity, together with an even and forgiving temper; and whose rules of conduct should be founded upon the strict laws of Equity and Justice; not deviating in the least from the above standard in order to favour either the employer or the employed; otherwise he may stand a fair chance of losing the good-will and esteem of one, or perhaps both of the above-named parties; he should always bear in mind, in all his actions, that a reciprocity of interests exists between them, which is indispensably necessary to the forwarding and excellent execution of any branch of art, and that it falls precisely within his province to promote and maintain this union of interests to the utmost of his power.

It has been observed, that an overseer should be the first and last in attendance at the office, in order that he may be satisfied that every person on the premises does his duty, likewise to observe that those on the establishment attend at their regular time: though the task of an early attendance in the morning would be more properly filled by the second in authority; because the principal manager would of necessity be frequently required to attend late in the evening to despatch proofs, &c.

The office being now swept, and the type selected from the dust by the errand boy, that found in the body of the rooms should be given to the overseer, or his deputy (if any), who ought immediately to distribute it, and then walk round the house in order that he may discover if the compositors have followed his example, by disposing of the portion found in each respective frame, likewise that no pie be left either on the frames, bulks, or gallies; should there be any, even a single letter, he should insist upon its being immediately distributed. Attention to this particular is of vast importance, because it not only keeps the office clear of pie, and thereby gives it a neat appearance, but it also prevents useful and valuable sorts from being buried, which would necessarily accrue from such neglect of duty.

He should likewise be possessed of a thorough knowledge of the state of every work in progress, and as a more effectual mode of expediting them, he may adopt the following rules. 1. In companionships, no man should be suffered to hold too large a taking of copy, otherwise he would keep his companions composing at random much longer than were necessary, which would of course retard the imposition of the sheet, and also require a much greater scope of letter to enable them to proceed with the work; from which cause, it is not at all improbable, but that the pressmen will have to remain idle in the first instance, and consequently the compositors in the second. 2. The moment a sheet is composed and made up, he should order it to be imposed, provided there be room on the imposing stone for that purpose. 3. The same expedition should be used in getting the proof pulled when imposed. 4. The reader should receive it instantly, and send it up leaf by leaf, to be corrected; which the overseer of course will direct to be forwarded immediately, should no obstacle occur to prevent it. 5. This duty performed, a second proof should be taken, which the reader should forward to the author, (if required,) or otherwise read it carefully through for press, the same expedition should be used in getting it finally corrected for working off.

Sorts not in general use, chases, furniture, leads, &c. should be locked up under the care of the overseer or his deputy, in order that they may be in readiness when required; he would also find a memorandum book, in which an entry of such sorts should be made, highly beneficial.

It is generally the business of the overseer to revise the proofs for press, in doing which he will be careful not only to ascertain whether all the corrections marked in the proof are made, but also to cast his eye carefully over the sides, head, and bottom of each page, as it frequently happens that the folios or catch-words drop out of the form in lifting it off the imposing stone; also in leaded matter, letters at the beginning and end of lines frequently fall out of their proper place, and by their standing crooked have a slovenly appearance. Before the revise is given to the compositor, the names of the pressmen who are intended to work off the form, should be entered in the *Press Book*. It should be an invariable rule with the overseer to require a second revise, in order to see if all the corrections have been made which were marked in the first: this is indispensably necessary, particularly with foul compositors, as no sort of dependance can be placed on them. He should, (where there is not a person engaged expressly for the purpose, as is the case in houses employing ten or fourteen presses,) go regularly round, about every quarter of an hour, to the different presses, and examine their work, point out defects, if any, and glance again over the heads, sides, and bottoms of the pages, to see if any thing has been drawn out by the balls, which frequently occurs from bad justification of the lines, and careless and improper locking up of the form. An active and conscientious overseer will not be content with merely managing the concerns of the composing-room; he will also see that the business of the warehouse is attended to with regularity and accuracy; and that the warehouseman, errand boys, and apprentices do their duty.

RULES TO BE OBSERVED BY COMPOSITORS.

1. Compositors to receive their cases from the overseer, or other person appointed by him, free from all pie, or other heterogeneous matter, with clean quadrat and space boxes to both roman and italic, which they are to return to him in the same clean state.

2. When a compositor receives letter, furniture, &c. from the overseer, he is to return what he does not use, in a satisfactory state.

3. Compositors to impose their matter when desired by the employer or overseer; and the same for proofs that are desired to be corrected; unless in either case it shall appear that all the stones are engaged.

4. When the compositor imposes from a form, he is directly to tie up the pages of loose matter.

5. Forms, immediately after they are imposed, to be carried to the proof-press; and the proofs, when pulled, to be given to the reader, or carried into the reading-closet, with, if a first proof, the copy; and, if a second, the foul proof.

6. No compositor shall leave a foul stone, either of letter, furniture, &c.

7. No compositor to detain an imposing stone longer than the nature of the business may require.

8. When any cases are taken out of the racks, the compositor is to return them into their proper place immediately after he has done with the same.

9. No cases to be placed over others, or under the frames.

10. Galleys with head-lines, or other useful materials, during the course of a piece of work, to be cleared at furthest the day after the work is all completely at press.

11. When a work is finishing, the compositor or compositors concerned shall, as the forms are finally worked, clear them away, taking from them the head-lines, white-lines, and direction-lines, as also the leads and reglets, which, with the furniture of each sheet, the matter being properly tied up for papering, are to be given to the overseer, or any person he may appoint.

12. Sweepings of frames to be cleared away before one o'clock every day. Matter broken by accident to be cleared away on the same day.

13. No compositor to mix two separate founts, without an express order from the overseer.

14. When a compositor carries his form down for press, he is not to put two forms together, without a partition between them.

15. The saw, saw-block, bowl, sponge, letter-brush, sheers, bellows, &c. to be returned to their respective places as soon as done with.

16. No person to take a candlestick, bodkin, snuffers, composing-stick, &c. not his own, without permission of the owner.

17. No person to misplace cases in the rack, or take an upper without the lower case, or *vice versâ*.

18. Pie of any sort, on boards, windows, frames, &c. to be cleared after five minutes' notice.

19. No person to take sorts from the frames or cases of another without leave; nor to hoard useful sorts, not immediately wanting them.

20. No person (except the master or overseer) to call off the errand boy while he is sweeping his rooms.

21. No candle to be left by any one, except in charge of some proper person; and the boundaries of the office to be considered, in all cases, the open air.

22. Jobs to be cleared away immediately after notice being given by the overseer.

23. These regulations, in extreme hurry of business, by leave from the master or overseer, may be suspended; but when that has ceased, to be immediately resumed.

THE BUSINESS OF A WAREHOUSEMAN.

THE warehouse business of a printer is a highly important part of his concern; the bad management of which not only injures his own credit, but also materially affects the interest of his employers; it is therefore indispensably necessary to appoint such a man for the management of it, who has been regularly brought up to the business, and on whom the utmost reliance may be placed for honesty, sobriety, and integrity.

Some printers, with a view to save a few shillings per week, take into their service lads, or men perfectly unacquainted with the business of the warehouse, who, through ignorance

and carelessness, fall into many serious mistakes ; such as mixing paper of the same size, belonging to different persons, and thereby destroying the uniformity of the work ; giving or setting out the paper incorrectly, which must afterwards be made good by reprinting those sheets which are found to be deficient ; or if the deficiency is not very great, the sheet wanting is left out of a book here and there, and in this imperfect state the work is delivered to the bookseller, who, perhaps, if a large number has been printed, will be several years before he discovers the loss, and then cannot, after so long a time, with any degree of propriety, demand his books to be made perfect. Many other circumstances might be stated to show the impropriety and disadvantage of employing persons in the warehouse not acquainted with its business ; we must however observe, that the master or overseer should frequently look to the concerns of the warehouse, that the people employed there may get forward the different works with neatness and accuracy.

Having made these observations on the impolicy of employing persons in the warehouse unacquainted with its business, it will be necessary to lay down its different stages, and begin by supposing the warehouse to be quite clear, business coming in, and the warehouseman just entering upon his office. He should first be provided with a book, which is termed "*The Warehouse-book*," about the size of a foolscap quarto. When the porter or carman brings paper from the stationer or bookseller, the warehouseman should demand the bill of delivery, order the paper to be brought in, and see if it is right according to the bill, before he discharges him ; and if right, dismiss him, and enter it immediately into the warehouse book.

Having entered the receipt of the paper, he should then write on each bundle, with red chalk, the title of the book it is intended for, and remove it into a part of the warehouse, or store-room kept for that purpose, observing to place it so as to take up as little room as possible.

OF GIVING OR SETTING OUT PAPER FOR THE PRESS.

A bundle of paper contains two reams, or forty-three quires, and twenty-four sheets to each quire, if perfect ; if not, twenty quires to the ream, of which the two outside quires are called *corded* or *cassie*, as they only serve for cases to the ream. These outside quires are by the paper-maker made up of torn, wrinkled, stained, and other damaged sheets, yet the whole quire very rarely consists of such sheets ; but frequently some good sheets may be found on looking them over. But the general custom now is, for booksellers and authors to send in their paper perfect. When, however, it is sent in imperfect, it is the warehouseman's business to lay by the two outside quires, and cull them when most convenient ; likewise to dispose of them so, that they may neither be at the beginning nor end, but about the middle of the volume ; or use them for jobs or proof paper ; for they are seldom so perfect as the inside quires.

It is the general custom to print of every work what is termed *even* number, either 250, 500, 750, 1,000, &c. These quantities are set out for the wetter in *tokens* ; viz. for 250 (sheets) one token, containing 10 quires 18 sheets ; for 500, two tokens—one 11 quires, and the other 10 quires and a half ; for 750, three tokens, two of them 11 quires each, and the other 10 quires 6 sheets ; and for 1,000, four tokens, three of them 11 quires

each, and the other 10 quires. If a work is printed in half sheets, it of course requires only half the above quantities.

As it will sometimes happen that other numbers different from the above are printed, the following table, will be found highly useful in the warehouse, and should be stuck up in a conspicuous place, or stiched into the *Warehouse-book*. The calculations have been made with much care, and will, be found accurate.

No.	Quires.	Sheets.	No.	Quires.	Sheets.
100	4	10	550	23	16
150	6	12	600	25	20
200	8	16	650	28	0
300	12	20	700	30	4
350	14	22	800	34	8
400	17	0	850	36	12
450	19	2	900	38	16
500	21	12	950	40	20

In giving out paper for what are termed *jobs*, it has been usual to give tables for this purpose, showing the quantity of paper to be given out for any job from 25 to 5,000; and from two on a sheet to 128; but it was totally useless: it never could be acted upon: the calculation was made upon quires of 25 sheets, which never are found in a book or job office; so that if the directions of this table were followed in a case, for instance, where it gave the quantity as 11 quires, without attending to the above circumstance, the work would be found 11 sheets deficient.

The only way found practicable, has been, to try by division how many sheets are requisite for the purpose; for example, a job (label or any thing else) 750, number, 32 32)750(23 on a sheet, will require 24 sheets, which will give an overplus of 18. 64 — If this is not thought sufficient, a remnant or sheet more must be given 110 out, calculating that where a sheet has to be cut into many parts, some 96 further allowance must be made for accidents. The overplus sheets being 14 partly allowed for tympan-sheets, and other incidents; such as bad sheets, faults committed in beating, pulling, bad register, &c.; in any of these casualties the pressman doubles the sheet in the middle, and lays it across the heap as waste: for in case that sheet should run short of its proper number, the gatherer may choose out the best of them to make good the deficiency. In setting out the paper, the warehouseman lays each token with the folded side, or back part, one way, and the other token with the folded, or back side the other way, that the wetter may distinguish the different tokens.

In concluding this portion of the *Printers' Manual*, I would earnestly recommend to the youthful aspirant for typographic fame; that it is not from books alone that a knowledge of his profession is to be obtained. He must seriously apply himself to the duty imposed upon him, and however irksome the task may be, perseverance will overcome many difficulties, and he will have the satisfaction of being regarded as an efficient workman by his employer, and meet with encouragement and promotion, that will lead him to wealth and honour, like hundreds who have trod in the same path. With diligence I would earnestly recommend sobriety, for without that, all talent becomes dead to the possessor.

DIRECTIONS TO PRESSMEN.

OF PRESSES.

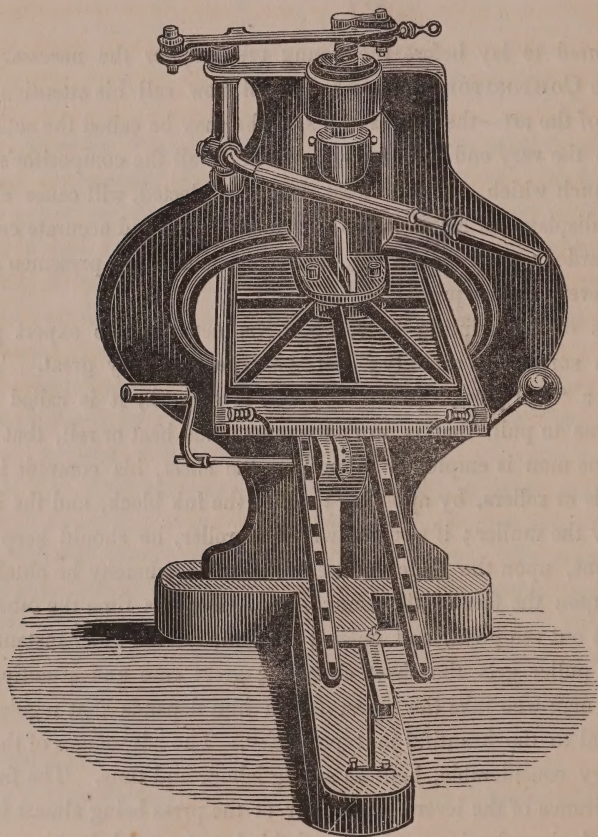
HAVING endeavoured to lay before the young typographer the necessary information connected with the COMPOSITOR'S business, I shall now call his attention to that most important branch of the art—the PRESSMAN'S, (who may be called the actual printer,)—a branch which is the very end and consummation of all the compositor's previous care and labour—a branch which, if in the least degree neglected, will cause all the printer's pains and skill in display, all his expenses in beautiful type and accurate correctors, to be passed over disregarded; therefore careful, ingenious, and sober pressmen stand high in the estimation of every master printer.

The operations of the printing-press, when conducted by an expert pressman, are performed with a surprising rapidity; but the labour is very great. Two men are required to make a "full press," (when only one is at work, it is called "half press") who take it by turns to pull, that is, work the press; and beat or roll, that is, to ink the types. Whilst one man is employed in pulling the sheet, his comrade is distributing the ink on his balls or rollers, by applying them to the ink block, and the ink should be well spread out by the muller; if working with the roller, he should keep it in motion in varying directions, upon the plane surface of the table, whereby he obtains a perfectly equal coat of ink upon the face of the composition. By this time the other man having made the pull, run out the press, and opened the tympan, the other instantly begins the inking, whilst the puller gets the sheet changed; great care and attention is necessary on the part of the man who inks the types, for on him depends that regularity of colour which is so essential to the beautiful in typography. The advantages of the iron presses in working are very considerable, both in saving labour and time. The first arises from the beautiful contrivance of the levers, the power of the press being almost incalculable at the moment of producing the impression; and this is not attended with a correspondent loss of time, as is the case in all other mechanical powers, because the power is only exerted at the moment of pressure, being before that adapted to bring down the platin as quickly as possible.

A new press should always be well employed for the first few months with heavy forms, and the pressmen ought to be particular in doing their duty, by taking care that they always keep on a sufficient power, and see that the bar be well pulled down. This is the only sure means of making it work free and well ever after: many a press has been spoiled by this neglect, and also that of working jobs at them before they are properly brought to their bearings. With the presses are sent practical directions to set them up, which a pressman should well attend to, so that at any time he may take

them to pieces and clean them, which is of the utmost importance. Our space compels us to be as brief as possible; but the following list of presses will enable the reader to know the names at least of the principal ones which have been offered to the profession.

A printing press is a machine requiring very accurate mechanical construction. At the earliest period of the art it was conceived to be so perfect that no very material improvements took place in its make, until lord Stanhope invented a press, constructed entirely of iron, from the general outlines of which, in all that have followed, the principle is essentially the same, and which press will ever bear the name of its inventor.

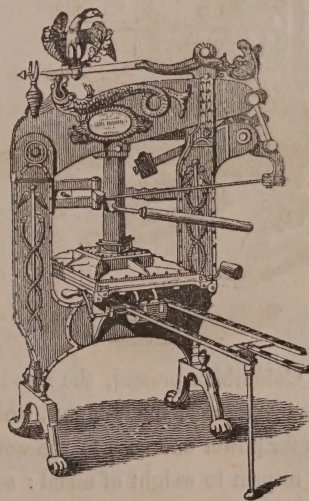


At the present day the old wooden press is nearly exploded, and therefore it would only be a waste of time to notice it; nor can I find space, but for those, which are very few, that possess all the requisites, for the purposes of printing, and repaying a master-printer for the great outlay. Lord Stanhope, with the assistance of Mr. Walker, an ingenious mechanic, introduced his press to public notice in the year 1800, and it has hitherto maintained its character for being well adapted for the purposes of printing; combining quickness with ease to the workman—evenness of impression—and durability and constant good condition. Lord Stanhope having objected to the taking out of a patent for his invention, it was consequently thrown open, upon which several engineers and smiths began to manufacture presses on the same principle; it is true some of them made

trifling alterations, but they were scarce worth notice; therefore, in order to find a market for them, they sold them somewhat cheaper; but those from the original manufactory were infinitely superior. A representation of this press is given, which consists of the following parts; the tee, staple, rounce, ribs, standard, main screw, short head, arbor, top plate, long head, coupling bar, piston, back plate, ears, balance weight, bar, plattin, table, and tympan. The first to deviate from the principles of the above press, was a German of the name of D'Eighn, whose press was known by the name of the **SECTOR**, which was much like the Stanhopean in formation; a great objection to which arises from the insecure manner of the *plattin*, which is by no means so effectually secured as it ought to be. They have a great quantity of ornamental brass work, which give them a pleasing appearance to the eye; but it is not the glitter of gaudy tinsel that a practical printer wants. D'Eighn afterwards disposed of his patent-right to a person of the name of Golding, who continued to manufacture them for some time. He then invented another press, and soon afterwards died, when his widow disposed of the patent to Mr. Cogger, who entered into partnership with a Mr. Scott, and their press was denominated the **COGGER**.

The next that came forward was Mr. Ruthven, a printer of Edinburgh, whose press differed materially from all that had preceded it, which he styled the **RUTHVEN**.

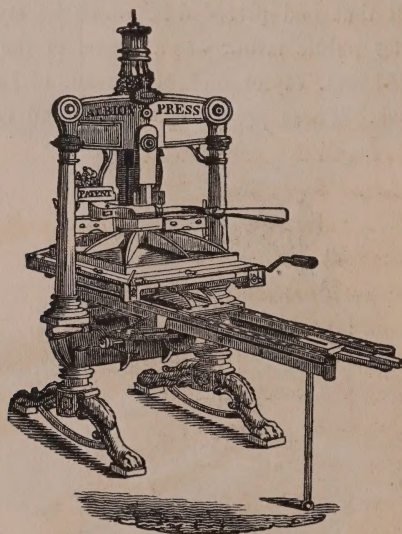
The next competitor for public favour was a person of the name of Russell, whose press is manufactured by Messrs. Taylor and Martineau, of London, and was denominated the **RUSSELL PRESS**. These presses are simple and easy to work, though apt to slur.



To the ingenuity and talent of Mr. George Clymer, of Philadelphia, we are indebted for the above press, which is denominated the **COLUMBIAN**, who, after having manufactured a supply of them at home, arrived in this country, in 1817, to introduce his press to the printers of Europe, which had given such universal satisfaction to those connected with the art in America. The highly favourable, and very flattering testimonials which Mr. Clymer produced on his arrival in London, from the gentlemen connected with the

press in different parts of the United States, where they had been in active operation, clearly evinced to the printers of Great Britain and Europe, that his invention was well deserving their countenance and encouragement; and, notwithstanding they had presses not only of the Stanhopean manufacture, but also of several others, yet the properties of Mr. Clymer's Columbian press, supported by the above testimonials, were the immediate cause of their introduction into several of the first houses in the metropolis, and many of the others soon followed; they were also introduced into several of the first printing-offices on the continent.—This press is composed of the following parts: the feet, staple, ribs, fore-stay, rounce, main lever, elbow-piece, counterpoise lever, links, table, plattin, piston, check or guide pieces, back bar, back-return lever, shoulder piece, bar, connecting rod, eagle, &c. To increase the power, take out the small bolt in the middle of the shoulder piece, and turn the rod to the right—that is, take up the screw: to diminish it, turn the rod to the left, viz. lengthen the rod by unscrewing: the filed part of the eye must always be kept downwards.

Dr. Church's, a native of America, followed the Columbian press: his plan differed from every other; and it may be stated that he failed altogether in producing a press worthy of notice.

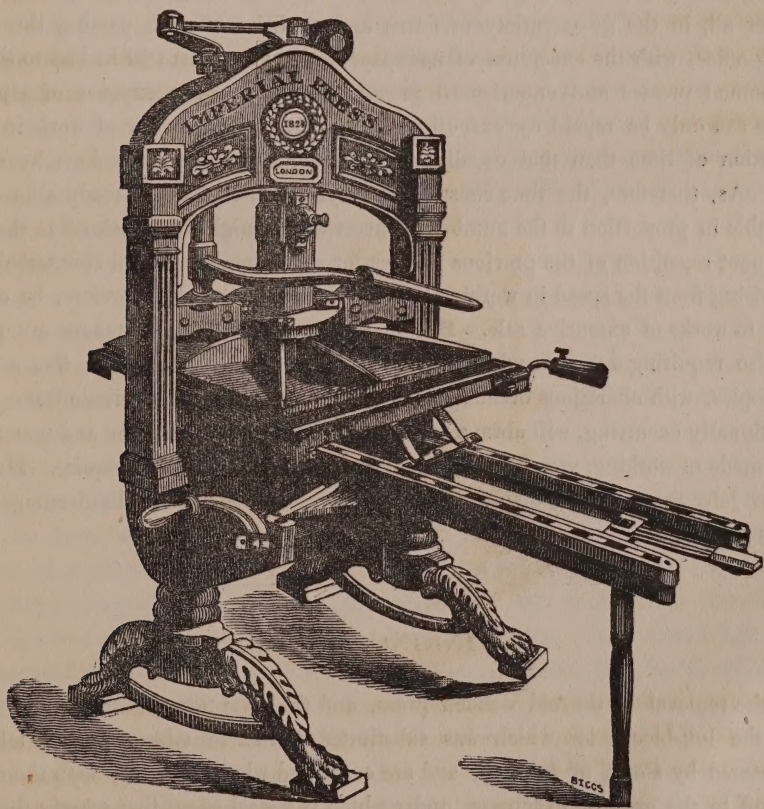


After the Stanhopean and Columbian presses, the meed of praise is due to the late R. W. Cope, of London, for his invention of the ALBION, which deserves to be placed in the first rank in the list of presses for power and ease to the workman in every point of view: first, they are much lighter in respect to weight of metal: secondly, the pull is very easy; notwithstanding which, it is equal in power to any of them, not even excepting the Columbian: thirdly, it is better adapted for expedition: fourthly, there are so few parts belonging to it, and consequently the machinery is in itself so simple, that there is not the least chance of their being put out of order, or liable to the least accident from wear: fifthly, the works being so simple, are all contained in the hollow of the piston, on which the power is given. This is the first instance of a hollow piston ever having been used for a press. Now manufactured by J. Hopkinson, Finsbury, London.

The next that came forward was Mr. Ruthven, a printer, at Edinburgh. He materially differed from all his predecessors: his press was styled the RUTHVEN. They unquestionably possess great power; but we object to these presses on account of the action of the bar, which is forced down by the pressure of the left, or by both hands. A man may sprain his wrist; or should his hand slip off, the rising of the bar would of course injure his arm between the latter and the press: also, from the very confined position of the works, it is almost next to an impossibility to oil or clean them without taking the press to pieces, which is a very troublesome and disagreeable operation.

Mr. Hope, of Jedburgh, in Scotland, was also the inventor of a press.

In 1820, Mr. Daniel Threadwell of the United States of America, came to England and took out a patent for a press, which was manufactured by Mr. Napier. In this press, the power necessary for giving the impression is obtained by means of a lever, or treadle.



The last, though not the least, in our notice of printing-presses manufactured in London, is that called the IMPERIAL PRINTING PRESS, invented and manufactured by Mr. J. Sherwin and J. Cope, and may justly vie with any of its competitors for ease, expedition, and durability.

THE BRITANNIA PRESS, invented and manufactured by R. Porter, of Leeds, in Yorkshire, is highly spoken of by many practical printers, and extensively patronized in the counties of York and Lancaster.

Many persons in different parts of the kingdom have entered the lists as makers of iron presses ; but, with very few exceptions, are they known beyond the vicinity where they are manufactured. The late Mr. Stafford, of Bingham, and his son and successor, have made some presses which are well thought of, though light, and consequently not adapted for heavy work. Their portable press is certainly deserving of support.

The invention of machinery, for the purposes of printing, first came into operation in England in the year 1814 ; and after many efforts, has now arrived at that state of perfection which seems to admit of no further improvement either for newspapers or for bookwork. To the ingenuity of Mr. Konig, a Saxon by birth, with the assistance of Mr. Bensley, Mr. Walters, and other eminent master printers, is the printing-trade indebted for this vast change in their profession. These machines are now principally manufactured by Messrs. Cowper, of London and Manchester ; by Mr. Napier, of London ; and by a firm at Belper, in Derbyshire.

After all, in the great variety of forms and qualities of work passing through any printing-office, with the exception of newspapers, recourse must still be had to the aid of good manual presses and experienced pressmen. The serious expense of a printing-machine can only be repaid by executing an extraordinary quantity of work in a much less portion of time than that usually occupied for the same work done by ordinary means. As, therefore, the time consumed in laying-on, or making ready a form, must be valuable in proportion to the number of sheets which might be struck off in that time ; so, frequent repetition of the previous process for short numbers would counterbalance all gains arising from the speed in working. Machine printing will, therefore, be only applicable to works of extensive sale. But those of which limited numbers are printed ; those also requiring a superior description of press-work with fine ink ; fine and large paper copies, with alterations of margin ; and many other peculiar circumstances which are continually occurring, will always require a judicious choice of men and materials, for the old mode of working, varied as circumstances may at the moment require. Half-sheet work, or jobs printed on one side only, are either impracticable or disadvantageous at a perfecting machine.

OF INKING TABLES.

WITH the removal of the old wooden press, and the invention of rollers, was also exploded the ink-block, for which was substituted frames or tables. These tables are manufactured by Cope, of London, and are composed wholly of iron, with the cylinder turned off to the greatest exactness, under which is a steel edge, that scrapes the ink off the cylinder to the exact quantity required : this is regulated by means of counterpoise levers that pass under the table, on which is hung two weights, to be removed according to the quantity of ink required for the work : one end of these levers are to press against the ductor, or regulator. The ductor and cylinder are fitted so close, that the latter will hold water ; consequently there is not the least possibility of more ink escaping than is wanted for the purpose required. The cylinder has an ornamental cover, which is always kept on except when a fresh supply of ink is required ; by which means all dirt

and dust is kept both from the ink and cylinder : the latter is moved by a small handle at one end : the table is turned off in a lathe perfectly true, the same as in the presses.—In addition to the above invention, many other descriptions of tables are in use : frames with mounted tops of marble, lead, or hard wood : those of the latter kind are in most general use throughout the kingdom.

MAKING READY A FORM.

A CAREFUL pressman will not omit, before he lays a form on the press, to wipe the table perfectly clean ; for if any (though small) hard particle be on it, the letter which stands on that matter will, with pulling, quickly rise, and not only make a stronger impression than the rest of the form, but bear off the adjacent letters. He also carefully examines whether the back side of the form be clean, before he lays it on, which should be as nearly as possible under the centre of the plattin. He then lays the tympan down upon the form, and places the blankets (which he rubs, to soften and equalize the nap) in it ; then putting in the inner tympan, he fastens it with the hooks and button for that purpose which prevents it from springing up. He then folds a sheet of the paper he is about to work in quarto, and lays the long crease of it upon the middle of the long cross, and the short crease over the middle of the grooves of the short cross, if it lie in the middle of the form ; for in twelves it does not, and then he folds the paper accordingly. Now, wetting his tympan, which is done only for very solid works, he turns it down upon the paper, and pulls the sheet, which, with the wet tympan and the force of the pull, causes it to stick. Turning up the tympan again, he examines if the sheet be laid even : if it has not been laid even on the form, it is better to re-lay it, and pull it again ; for it is of considerable importance that it should be put on perfectly even. This sheet is called the tympan-sheet, and is placed there as a guide to lay all the other sheets even upon while he works the white paper. Having fastened his tympan-sheet, he next chooses his points : for large paper short-shanked points, for small paper long-shanked ones, and others in proportion to the intermediate sizes of paper ; for his points ought to be so placed, that, in working the reiteration, the point-holes may be pricked within the grasp of the hollow between his right hand thumb and fore finger. Nor should he place his points too near the edge of the paper ; for, in working the reiteration, he would be forced to carry his furthest point-hole the further from him, which in a long number loses time. Also, the less distance there is between the off and near point-hole the better, as it saves time ; as he must draw his body so much the further back, to place that hole on its point : he, therefore, places the near point further into the paper than the off point, if it be folio, quarto, or octavo, but to twelves equally distant from both edges of the paper. By placing the points according to the above directions, it likewise prevents the workman from turning his heap wrong on its reiteration. Having made choice of properly-spurred points, he places them securely under the point-screws parallel to each other. This done, he next lays the tympan down upon the form, holding the frisket-end of it in his left hand, about an inch and a half above the face of the letter, and sinks his body downwards till he can see between the form and tympan, and with the ball of the middle finger of his

right hand presses gently upon the tympan over the point ends of each point successively, to see if they fall in or near the middle of the grooves of the short cross. If they fall in the middle of those grooves the form lies exactly between the middle of both the ends; if they fall not exactly in the middle, he moves the form between the ends of the table till they do, and then quoins both ends of the chase. But this latter operation will in a great measure be rendered unnecessary, if the workman uses care in placing the crease of his tympan-sheet in the centre of the short cross. The pressman next proceeds to adjust his frisket, which must be covered with stiff paper, to perform which he fits the match-joints of the frisket into those of the tympan, turns down the frisket and tympan, and pulls an impression. He then takes off the frisket, places it flat on the bank, and with the point of a sharp knife cuts through the frisket about all the sides of each page, allowing to each he thus cuts out about a nonpareil margin on all the sides of the cut pages, and afterwards replaces the frisket again on the tympan. A revise is now pulled and sent to the reader. Before going on with the work, the pressman proceeds to level his impression, which is effected in the following manner: Having pulled a dry sheet of paper, and placed it on the back part of his tympan, he is then enabled to see the imperfections of impression arising from unevenness of blankets, &c.; these he carefully removes, by cutting out the hard parts with his scissors, and covering the low parts with corresponding thicknesses of paper. When he has satisfied himself that the cut-in sheet is perfect, he then removes the inner tympan, places the sheet upon the blanket, and feeling with his fingers that the impression corresponds with the position of the form underneath, he pastes the sheet at the four corners, replaces the inner tympan, and in this manner affixes the overlays to the inner side of the drawer or inner tympan. Should one cut-in sheet be found not sufficient, (which is frequently the case with stereotype work, and with presses having imperfect tables and plattins) it will be necessary to repeat this operation a second or third time. The revise being returned, the working off what is termed "the white paper form" now commences.—Having brought our instructions for making ready a form thus far, we shall now direct the attention of the workman to the concluding part of his labours, viz. the laying on of the outer or reiteration form. In this stage of the work, the three points for his consideration will be the production of an even impression, an equal colour with the first side, and accurate register. Presuming that the compositor has paid proper attention to pairing and dressing the chases, the pressman will not have much difficulty in making register. In reiteration, the quoins on the off side, and right hand end of the table, are seldom moved, but lie as gauges for every succeeding form; for thrusting the chase close against these quoins, the register is almost, if not quite made. To prove the register, he removes the frisket, and points and pulls a sheet of the work. On raising the tympan, the sheet (released by the absence of the frisket) will be left on the form, with the printed side upwards. The eye will now readily detect any deficiency in the register. Should the latter be out at the sides, it must be remedied by moving the points; if out at the heads, the moving of the quoins on the off or near sides of the table must effect the desired alteration. In the event of these operations failing to produce register, he may add to or diminish the scaleboard dressing of the chase; but should the inaccuracy arise from imperfect making-up of pages or furniture, he must in no instance meddle with the integral parts of the form, as, in the event of letters slipping, leads riding, &c. the pressman

will be held responsible. This is properly the compositor's duty. Care is also recommended to the workman, in producing good register, to avoid having ragged point-holes on the white paper. Where spring points are not at hand, this evil may be avoided by placing paper bolsters in a parallel line with the ends of the points.

In addition to the above instructions it must be observed, that under the phrase of "making ready a form" are comprehended many other operations. 1. The frisket must be covered with stiff paper, by means of paste. 2. He sees that the form is properly locked up. 3. That no letters or spaces lie in the white lines of the form; which may happen, if the compositor have made any corrections since the form was laid on the press. 4. If any wood cuts be in the form, that they be exactly letter high; if not, for it seldom happens that they are, he must make them so. If they are too low, he underlays them; if too high, they must be planed lower at the bottom, or he may introduce a few sheets of paper in the tympan, and cut away the part that bears on the cut until he gets it even. 5. If a white page or pages occur in a form, and he uses a new made frisket, he does not cut out that page; but if he works with an old frisket, and that page is already cut out, he pastes on a piece of paper to cover the white page, that it may not black. 6. Those pages adjacent to a blank one will come off harder than any other in the form; to prevent which, he fits a bearer on the frisket. Bearers are now made of wrapper paper, rolled up, forming a cushion, and pasted on the frisket, which, from its elasticity, is superior to the reglet, formerly used. Cork bearers are also frequently used to advantage, in preventing shakes at unprotected parts of the form. 7. He examines whether the frisket bites; that is, whether it keeps off any part of the impression; if it does, he cuts away the part, and about a nonpareil more, where this occurs. 8. Few pressmen will set the range of the bank to stand at a right angle with the table, but draw the further end of it so as that the near side may make an angle of about seventy-five degrees. The reason is, if the near side of the bank stand at right angles with the near side of the table, he must carry his hand further when he lays or casts his sheets, which would occasion delay: besides, his partner has a near access to it, to look over the heap, which he frequently does, to see the colour of the work, picks, and other casualties which may arise during the progress of the work. It may be proper to notice, that when a work is imposed sheet ways, and one form has wood cuts in it and the other none, it is best to work that form with wood cuts in last, in order to prevent them from setting off.

OF ROLLING AND PULLING.

THE puller lays on the sheets, lays down the frisket and tympan, runs in and out the carriage, takes up the tympan and frisket, takes off the sheet, and lays it on the heap. All these operations are in general mingled and lost in the name of pulling; and as in pulling, so in rolling; for though the roller brayers out the ink, distributes the roller on the inking table, yet these operations are also lost in the general term of rolling.

To take a sheet off the heap, the puller places his body almost straight before the near side of the tympan, and nimbly twists the upper part of his body a little backwards towards the heap, the better to see that he takes but one sheet off, which he loosens from

the rest of the heap by drawing the back of the nail of his right thumb quickly over the bottom part of the heap (but in the reiteration, care should be observed to draw the thumb on the margin, or between the gutters, that the sheet may not smear or set off), and, receiving the near end of the sheet with his left hand fingers and thumb, catches it with his right hand about two inches within the further edge of the sheet, near the upper corner, and about the length of his thumb below the near edge of the sheet, and brings it swiftly to the tympan, and at the same time twists his body again before the tympan, only moving his right foot a little from its first station forwards under the table; and as the sheet is coming to the tympan (suppose it to be white paper) he nimbly disposes the fingers of his right hand under the further edge of the sheet near the upper corner; and having the sheet thus in both his hands, lays the further side and two extreme corners of the sheet down even upon the further side and extreme further corners of the tympan-sheet; but he is careful that the upper corner of the sheet be first laid even upon the upper corner of the tympan-sheet, that he may the sooner disengage his right hand. If, however, by a quick glance of his eye, he perceives the sides of the sheet lie uneven on the tympan-sheet, with his left hand at the bottom corner of the sheet, he either draws it backwards, or pulls it forwards, as the sheet may lie higher or lower on the near corners of the tympan-sheet, while his right hand, being disengaged, is removed to the back of the ear of the frisket, and with it gives it a light touch to bring it down upon the tympan, laying, at the same moment, the tympan on the form. He then, with his left hand, grasps the rounce-handle, and with a moderate strength quickly brings the table to the mark for the pull on the further rail of the tympan; and as it is running in, slips his hand to the end of the bar, gently leaning his body backwards he pulls the bar towards him, and thus effects the impression. Having made the pull, and the rounce still in his left hand, he expeditiously returns the bar to its place, and, at the same moment, gives a quick and strong pressure on the rounce, to run the table out again. As soon as he has given this pressure, he disengages his left hand from the rounce, and brings it towards the bottom of the tympan, to assist the right hand in lifting it up, and also to be ready to catch the bottom of the sheet when the frisket rises. While the frisket is going up, which should be conveyed quickly and gently to the catch up, he slips the thumb of his left hand under the near lower corner of the sheet, which, with the assistance of his two fore fingers, he rises, and by so doing allows the right hand also to grasp it at the top, in the same manner, which lifts the sheet carefully and expeditiously off the points, and turning himself quickly towards the paper bank, carries the sheet over the heap of white paper to the bank, and lays it down upon a waste sheet or wrapper put there for that purpose: but while it is coming over the white paper heap, though he has the sheet between both his fore fingers and thumbs, yet he holds it so loosely, that it may move between them as on two centres, as he twists himself from the side of the tympan towards the side of the paper bank. Thus, both the pressman's hands at the same time are alternately engaged in different operations; for while his right hand is employed in one action, his left is busy in another; and these exercises are so suddenly varied, that they seem to slide into one another's position, beginning when the former is but half performed. Having thus pulled a sheet, and laid it down, he turns himself towards the tympan again; and, as he is turning, gives the next sheet on the white paper heap a touch again with the back of the

right thumb nail, to draw it a little over the edge of the heap, and lays it on the tympan, as before, and so on till the whole heap of white paper be worked off. When he comes to a token sheet, he undoubles it, and smooths out the crease with the back of the nails of his right hand, that the face of the letter may print upon smooth paper; when printed he folds it again, as a token sheet for the reiteration. Having worked off the white paper of twelves, or any form imposed like twelves, he places his right hand under the heap, and his left supporting the end near him, turns it over on the horse, with the printed side downwards: if octavo, or similar works, he places his left hand under the heap, and also supports the outside near end with his right, and turns it over, viz. one end over the other. In performing this, he takes from the worked off heap so much at once between both his hands as he can well govern, without disordering or rendering the sides of the heap uneven, viz. a token or more, and lays it upon the horse; then takes another lift, and so successively, till he has turned the whole heap. Having turned the heap, he proceeds to make register, which he does by laying one of the sheets just printed on one side, upon the tympan sheet, for a register sheet, and a waste sheet over that to keep it clean from any filth the face of the letter might otherwise imprint upon it, and pulls these two sheets. Then he runs out the carriage, lifts up the tympan, and takes off the two sheets, laying the waste sheet by: but turns the other side of the register sheet, to try how the impression of the sides of all the pages agrees, and lies upon the impression of the sides already printed. If he finds they agree perfectly well, the register is made. But if on the contrary the pages do not fall accurately one upon the other, he observes how far they stand uneven, and loosens the quoins on either side of the corner irons of the coffin, that the form may be driven over or brought nearer to him, in order to make the register of the sides of the pages correct. It sometimes happens that it cannot be made by moving the form on the press, on account of some defect in the furniture—it must therefore be remedied by altering the gutters, &c. but by the introduction of metal furniture, and having accurately made chases of the best scrap iron, the making of register will be greatly facilitated, and the practice of irregular locking up one quarter of the form to force the other into register, obviated, which is too frequently resorted to.

A deviation in the register of the heads of the pages may be remedied by moving the points on the tympan either up or down; but when they are considerably out of register the form must be moved either towards the plattin or the tympan. Having made register, he proceeds to work off the form; but he now somewhat varies his posture in laying on the sheet; for, as before, in working the white paper, he caught the sheet by the upper further corner with his right hand, he now catches it as near the further point hole as he can, with the ball of his right hand thumb above the sheet, and the ball of his fore finger under the sheet, the readier to lay the point hole over its respective point; which having done, he slips himself a little backwards, and both his hands with it, his right hand towards the near point hole, with the back of the nails of his fingers to draw or stroke it over the point; and the fingers of his left hand, as they come from the further corner, quickly slipping along the bottom edge of the sheet, till they come to the hither corner; and then with the fore finger and thumb lays hold of it, in order to guide the point hole on that point also: he then pulls the sheet, as before, and so successively all the rest of the reiteration. The token sheets are not now to be folded down as in working the white paper.

THE TYMPANS.

THE outer tympan is a square frame, generally made of iron; in the middle of each side of which a mortice is made through, half an inch wide, and six inches long, to receive the square shanks of the point screws, and to allow them to slide easily backward and forward. The inner tympan is also a square frame. It is made so much shorter than the outer tympan, that the outer edge of the iron of the inner tympan may be within the edge of the iron of the outer tympan; and it is made so much narrower than the inside of the outer tympan, that a convenient space may be allowed to paste a vellum between the inside of the outer tympan and the outside of the inner tympan. The two tympana are fastened by hooks fixed on the outer tympan, and eyes on the inner. They are covered as follows: having provided some stiff paste, so much of it is laid on the edges of the parchment as will cover the tympan, which is also well pasted. The skin is then laid on the tympan, and drawn regularly, as tight as possible, on all sides. That part of the skin that comes on the grooves of the tympan which receive the point-screws, is cut and wrapt round the inside edge of the groove, which admits a free passage for the screws. After having fastened the skin on the sides of the tympan, it is drawn towards the joints which receive the frisket, and with a knife cut across these joints to let them through the skin; the frisket pins are then put through the same, which makes that end of the tympan fast. Proceed next to the lower joints, and bring the skin as tight as possible round that part of the tympan. The point-screws and duck's-bill are then put on, which prevent the skin from starting. The inner tympan is covered in the same manner, and in order to prevent its warping, a stick or a piece of furniture is placed in the centre of it, till it be perfectly dry. The skins are put on either wet or dry; if dry, they should be afterwards well wet, which makes them give way for the moment; they are then drawn as tight as possible. As they dry, they contract, and are by this means rendered much tighter than they would be if put on wet. The outer tympan is sometimes covered with fine canvas.

POINTS AND SCREWS.

POINTS are made of sheet iron, of different lengths, about the sixteenth part of an inch thick. The spur of the point is rivetted at the small end, and projects about three-eighths of an inch; the top of it is filed away to a fine point. The large end of the point fills into the square shank of the point screws. These screws are made of iron, with a thin head, about an inch square, and a square shank just under the head, an inch deep, and half an inch square. Under this shank a screw is made, with a nut, and washer, which, when put through the inner tympan, draws the head of the shank close down to the tympan, and by that means secures the point in its proper place, on the outer tympan.

THE FRISKET.

THE frisket is a thin iron frame, made of different sizes, with match joints at one end, through which an iron pin is placed. About the middle of the near side of the frisket, a small piece of iron projects, called the ear, or thumb piece.

THE BLANKETS.

A matter of great importance towards obtaining good press-work is, the substance which is fixed in the tympan to intervene between the type and the platin, in order, when the power is applied, to cause an impression into the substance of the paper. Whatever is used for this occasion it is now become technically correct to denominate the blankets. For this purpose there has been generally used a kind of blanket, manufactured for the purpose, of a more even fibre than ordinary blanketing, free from knots, and having a very fine surface, or pile : and to vary the impression as different kinds of work might require, very thin, or Welsh flannel, kerseymeres, or fine broad cloth were used. These are varied by the judgment of the master or pressman, according to the type, paper, ink, &c. with which he works : thus for very close or heavy forms, small type, he must select the softest woollen blanket ; for larger type and lighter work he must select the finer flannel, or cloth blanket, and for yet larger type and more open work, he must continue the change to a single kerseymere. Again, a discretion will be required, according to the state or wear of the type—the newer the letter and sharper the ceriph, the finer may be the work, the stronger the ink, and the harder the impression ; while, on the contrary, in order to make type which has been worn appear *well up to paper*, additional softness must be given. The kind of press, also, at which the work is to be done requires to be treated with a due degree of discrimination. In fact, nothing but observation, experience, and good mechanical common sense can best guide the judgment of the pressman in this most material point of *making ready*. By the various changes and combinations of his blankets, adding a soft to a hard, or a hard to a soft one ; reversing them in regard to the one or the other falling next the type ; adding a sheet of paper, or glazed paper, between, or under, or over, he must, with necessary judgment and patience, regulate his pull according to the various combinations of circumstances which may attend his work.

THE BRAYER AND SLICE.

THE brayer is made of beech, and turned round on its sides, and flat on the bottom ; its length, including the handle, is about seven inches, and the bottom part about two inches and a half in diameter. The slice is a small iron shovel, the broadest part about four inches, and about the eighth of an inch thick. Its length, including the handle, is eight inches.

BANK AND PAPER-HORSE.

THE bank is a deal table, three feet four inches long, twenty-two inches wide, and three feet high. About five inches from the bottom, a board is placed within two inches of the length and breadth of the bank, and fastened to the legs, which serve as a convenient shelf for presmen to lay their worked-off heaps. The paper-horse is also made of deal, two feet two inches long, and twenty inches wide, forming an angle of about forty-five degrees, six inches of the highest end of it rising nearly to a perpendicular. The horse receives the wet paper, and is placed on the bank near to the tympan.

WETTING PAPER.

PAPER is commonly wet in a trough lined with lead, full of clean water. The paper intended to be wet is placed on the left hand of the trough, and a paper board with its breadth before him on the right, laying first a wrapper or a waste sheet of paper on it, that it may not soil the first sheet of the heap. Then take up the first token, and lay it with the backs of the quires towards the right hand, that it may be caught more readily at the back of each quire with that hand, laying that token across the rest of the heap, that he may the easier know when he comes to the end of it. Take a quire by the centre of the back in the right hand, and the edge of it in the left, and lay it down upon the waste sheet, open it, and leave a few sheets. Having laid down this dry laying, take the remainder of the quire with the back of it in the right hand, and the edge of it in the left, as before, and closing the hand a little, that the quire may bend rather downwards between the hands, dip the back of the quire into the left hand side of the trough; and discharging the left hand of the quire, draw it through the water with the right; but as the quire comes out, quickly catch the edge of it again in the left hand, and bring it to the heap; and by lifting up the left hand, bear the under side of the quire of the dry paper, laid down before, lest the dry sheet should stick to the wet before the quire is placed in an even position, and so perhaps wrinkle a sheet or two, or else put a dry sheet or two out of their even position. But this drawing the quire through the water, is performed either quick or slow; if the paper be weak and spongy, perform it quickly; if strong and stubborn, slowly. To place this quire in an even position, lay the back of it exactly upon the open sheet of the former, and then let the side of the quire in the left hand fall flat down upon the heap; and discharging the right hand, bring it to the edge of the quire; and with the assistance of the left thumb, still in its first position, open or divide either a third or half of the whole quire, according to the quality of the paper; and spreading the fingers of the right hand as much as possible through the length of the quire, turn over the open division of it upon the right hand side of the heap. Having wet the first token, double down a corner of the upper sheet of it on the right hand, so that the further corner may lie a little towards the left hand of the crease in the middle of the heap, and that the other corner may hang out on the near side of the heap, about an inch and a half; this sheet is called a token sheet, placed as a mark for the pressman, that he may know how many tokens the heap consists of. Having wet the whole heap, lay a wrapper or waste sheet of paper upon it, that the paper-board may not soil the last sheet; then take up as much water as you can in the hollow of the hand, and throw it over the waste sheet, that it may moisten and soak downwards into the unwet part of the last division of the quire. This is repeated three or four times. The paper being thus wet, the heap is removed upon the paper-board, and set by in a part of the room, appropriated for that purpose, and another board laid upon it; and upon the middle of the board is set about half a hundred weight, which remains for the purpose of pressing the heap, generally till next morning; as pressmen usually wet their paper after they have left work at night. All paper would be better if it were separated and turned in the course of the next morning, if it has been wet over night, and pressed again for seven or eight hours. Paper, or wetting boards, are made of deal to the sizes required; they should be kept solely for that purpose, and by no means allowed to be used to unlock forms upon.

RULES AND REMEDIES FOR PRESSMEN.

It is the business of the pressman to pull proofs whenever they are wanted. In most offices of any extent, an empty press, called a proof press, is generally placed in some part of the composing room. The slovenly manner in which proofs are too often pulled, cannot be sufficiently reprobated. It is the duty of the corrector to notice whatever appears faulty or defective in the type; consequently, upon dirty, or almost illegible proofs, the marks will be numerous, and the trouble and loss of time to the compositor great and vexatious. This is not the greatest evil: the most careful and attentive reader will not, in such proofs, be able to discover faults, which, if he but glance his eye over the sheet at press, will so stare him in the face, as to make him almost involuntarily cry out,

"Thou canst not say that I did it."

No proof should be received by the reader, that has not been pulled perfectly clean and legible; the pressman would then be obliged to take some pains in this respect. After a proof has been made, the form should be well rubbed over with clean lye.

About every three sheets a small quantity of ink should be taken, and during the intervals the roller is not employed in brayering out or taking ink, he should be overlooking the heap in order to detect any want of uniformity in the colour; to observe if any letters, quadrats, or furniture rise; that no letters are drawn out, or battered; that the register be good, and the work free from picks: during this examination, the roller must be distributed as much as possible. When, through carelessness, too much ink has been taken, it should be removed by laying a piece of clean waste paper on the ink table, and distributing the ink upon it until it is reduced to the proper quantity. If letters, quadrats, or furniture, rise up and black the paper, they should be put down with the bodkin, and the quarter locked up tighter. If any letters are battered, the quarter they are in must be unlocked, and perfect ones put in by the compositor. When bearers become too thin by long working, they should be replaced by thicker ones. When the form gets out of register, which will often happen by the starting of the quoins, which secure the chase, it must be immediately put in again, as there can scarcely be a greater defect in a book, than a want of uniformity in this particular. If picks, which are produced by bits of paper, skin, or film of ink and grease or filth, get into the form, they are removed with the point of a pin or needle; but if the form is much clogged with them, it should be well rubbed over with clean lye, or taken off, and washed: in either case, before the pressman goes on again, it should be made perfectly dry by pulling a waste sheet or two, in order to suck up the water deposited in the cavities of the letter. The puller should habituate himself to glance his eye over every sheet, as he takes it off the tympan; this may be done without retarding his progress; by following this plan, he will be enabled to detect imperfections which may escape the roller. In order to ensure uniformity in receiving ink from the table, care should be taken to brayer out at the edge of the table, small quantities at a time. Torn or stained sheets met with in the course of work, are thrown out and placed under the bank; but the pressman should be particular in having them supplied by others from the warehouseman. Creases and wrinkles will frequently happen in the sheets, through careless wetting of the paper; these should be carefully removed by smoothing them out with the back of the nails of the right hand.

Doubling happens when the face of the plattin and the inner tympan are both dirty, which occasions them to stick; they should always be kept perfectly clean. Slack or rickety tympan will also cause doubling; and leaning the body against the carriage in reaching the bar, in presses without guide cramps, or where the cramps do not act with truth. The paper being rather too dry will also sometimes cause the impression to mackle. Slurring and mackling will frequently happen when the tympan are carelessly and suddenly put on the form: they should always be laid down easy, and the slur screw made proper use of. Leaning against the carriage, as before mentioned, will also cause a slur. If the plattin rub against the rail of the tympan, it will inevitably cause a slur and mackle. This can easily be remedied by moving the tympan joints so as to clear the plattin. The ear of the frisket being so long as to cause it to rub against the cheek, always produces a slur: remedy—make it shorter. Loose tympan will at all times slur the work; great care must therefore be observed in drawing them perfectly tight. Independently of the above causes, slurring and mackling will sometimes happen from causes which baffle all art and patience to detect. It will be better in this case to tie as many cords as possible across the frisket, which will keep the sheet close to the tympan.

Before the pressman leaves his work, he covers his heap. He first turns down a sheet like a token sheet, where he leaves off, then puts a quantity of the worked off sheets on it, taking care to have the printed side upwards, that his companion, if he have any, in coming to work first in the morning, may not be deceived in taking it for the reiteration. Laying the blanket on the heap, after leaving off work, is a bad custom. If the paper be rather dry, it will be well to put wet wrappers on it. The blankets should always be kept as dry as possible, that they may not make the inner tympan damp and slack.

The pressman next observes whether his form be clean; if so, he puts a sheet of waste paper between the tympan and frisket, and lays them down on the form: if it be dirty, it must be rubbed over with clean lye. In the morning, he takes care to wet the tympan, but not for very light work. If there should happen to be any pages in the form particularly open, those parts of the tympan where they fall must not be wetted.

As the mode of reckoning press work by "tokens" and "hours," is sometimes difficult to those who have not daily practice, a table is given, which perhaps may save trouble. 250 is a token; each token, in ordinary work, is reckoned an hour, and it is equally correct to say, technically, that a form is so many token, or so many hours: thus, 2,000 is 4 tokens, or 4 hours one side—8 hours, or 8 tokens perfect, and the price for this is so many tokens for each man; so that 1,000 in price, is sixteen times the sum at which the work is paid per hour.

Sheet Perfect.	Hours.	4½d.		5d.		5½d.		6d.
		s.	d.	s.	d.	s.	d.	s.
250 ...	4	1	6	1	8	1	10	2
500 ...	8	3	0	3	4	3	8	4
750 ...	12	4	6	5	0	5	6	6
1,000 ...	16	6	0	6	8	7	4	8
1,250 ...	20	7	6	8	4	9	2	10
1,500 ...	24	9	0	10	0	11	0	12
1,750 ...	28	10	6	11	8	12	10	14
2,000 ...	32	12	0	13	4	14	8	16

SCALE OF PRICES FOR PRESS WORK,

Agreed upon at a General Meeting of Master Printers, held at Stationers'-hall, Feb. 8, 1810; with the Alteration agreed on in 1816, and as specified in the fourth column annexed.

		1810.			Modification of 1816.
		250	500 and 750	1,000	Every token above the first four,
FOLIOS :—ON MEDIUM OR DEMY.					
Not exceeding 52 Pica ems (in the width of the page) upon Small Pica and upwards		d.	d.	d.	d.
If on Long Primer, Bourgeois, or Brevier		6	5½	5	4½
All above 52 Pica ems, upon Small Pica and upwards		7	6	5½	5
If on Long Primer, Bourgeois, or Brevier		7	6	5½	5
Long Primer and upwards, on Copy or Crown.....		7	6½	6	5½
		6	5½	5	4½
QUARTOS :—ON MEDIUM OR DEMY.					
Not exceeding 40 Pica ems, upon Long Primer and upwards		6	5½	5	4½
If on Bourgeois or Brevier		6	5½	5½	5
All above 40 Pica ems, and not less than Long Primer		7	5½	5½	5
If on Bourgeois or Brevier		7	6	6	5½
Brevier and upwards, on Copy or Crown.....		6	5½	5	4½
OCTAVOS :—ON MEDIUM OR DEMY.					
Not exceeding 24 Pica ems, upon small Pica and upwards		6	5½	5	4½
If on Long Primer, Bourgeois, or Brevier		7	5½	5	4½
All above 24 Pica ems, on Brevier or upwards.....		7	6	5½	5
If less than Brevier		8	6½	6	5½
Brevier and upwards, on Copy or Crown.....		6	5½	5	4½
TWELVES :—ON MEDIUM OR DEMY.					
Not exceeding 21 Pica ems, upon Long Primer and upwards		7	5½	5	4½
If on Bourgeois or Brevier		7	6	5½	5
All above 21 Pica ems, upon Long Primer and upwards.....		8	7	5½	5
If on Bourgeois or Brevier.....		8	7	6	5½
Long Primer, Bourgeois, or Brevier, on Copy or Crown.....		7	5½	5	4½
EIGHTEENS.					
If not less than Small Pica		7	5½	5	4½
If on Long Primer, Bourgeois, or Brevier		7	6	5½	5
If less than Brevier.....		8	7	6	5½
TWENTY-FOURS AND THIRTY-TWOS.					
If not less than Small Pica		7	6	5½	5
If on Long Primer, Bourgeois, or Brevier		8	7	6	5½
If less than Brevier		9	8	6½	6
POCKET BOOKS.					
OCTAVO.—Post or Crown, 21 Pica ems wide, 35 long		7	6	5	4½
TWELVES.	{ Pot, such as Lady's and Christian Lady's. Table part, 6mo. 35 Pica ems wide, 26 long	7	6	5	4½
		Miscellany			
		7	6	5	4½
		7	6	5	4½
	part, 16 Pica ems wide, 26 long	7	6	5	4½
	Copy, Christian Gentleman's, 26 Pica ems wide, 25 long	7	6	5	4½
SCHOOL BOOKS.					
TWELVES.—Copy or Crown, not exceeding 17 Pica ems wide, 31 long, nor less than Brevier.....		7	6	5	4½
OCTAVO.—Copy or Crown, not exceeding 21 Pica ems wide nor less than Long Primer		6	5½	4½	4½
N.B.—School Books on Copy or Crown are defined to be Palaiet's French Grammar, Chambaud's, Salisbury Spelling Book, Fox's Lessons, Ward's Latin Grammar, and all other works of a similar description.					

ALMANACKS.

	d.
Royal Broad sides	7
Demy ditto, Size Wing, or Cambridge	5½
Goldsmith, Calendar form.....	5½
Ditto, Prog.....	5
Twelves demy, 19 ems wide, 34 long, Cal.	5½
Ditto, Prog.....	5
Ditto, Crown, Size Rider	5
8vo. Fcap. 20 ems wide, 34 long, Cal. & Pro.	5

BILLS IN PARLIAMENT.

	d.
From No. 4 inclusive to any No. under 100	4½
If 100, and under 200.....	5
If 200 or 250	5½
Above 250 and under 400	4½
If 400 or 500	5
If above 500 and under 700	4½
If 700 or 750	5
All above 750	4½

N.B. Side notes to be reckoned in the width; bottom notes not to be regarded.

Works on royal paper to be paid one halfpenny per hour more than the above prices. Ditto on foolscap or pot, not less than 1,000 number, and worked at one pull, 4½d. Ditto, in square pages (like Entick's Dictionary) and works for the public offices, to be advanced one halfpenny per hour on the scale of 1800. Fine paper of the same size, if included within the token, not to be charged extra; but, if of a larger size, then to be paid according to the scale.

Three or more proofs pulled at one time, to be charged 4d. per form; and, if made ready, to be charged as a token.

Cards, large or small, to be paid 6½d. per 100. Jobs without points to be paid 4½d. an hour. Double crown or royal broadsides, not exceeding 100 number, to be paid 1s. 6d. if more than 100, to be paid 1s. per 100. Demy broadsides, not more than 100, to be paid 1s.; above 100, and not exceeding 500, to be paid 10d. per 100; if above 500, to be paid at the rate of 1s. 9d. per token. Broad sides requiring three pulls to be paid one-third more. No form to be deemed a broadside that comes in at one pull at the common press.

Night-work to commence and be paid for, from ten o'clock till twelve, 1s.; all after to be paid 3d. an hour extra till six. Morning work, commencing at four o'clock, to be paid 1s. extra. Sunday work, if not exceeding 6 hours, to be paid for 1s. if for a longer time 2d. an hour.

It is to be distinctly understood that no advance shall take place on any works but those which are paid by the scale.

PRINTING RED, OR OTHER COLOURS, WITH BLACK.

FIRST, by underlaying:—When red and black are to be printed on the same sheet, the form is made ready in the usual way, and a line traced all round the outside of the chase to show the situation in which the form must be replaced after it has been taken off the press. The pressman then pulls a sheet, in order to get those words or lines marked which are to be worked red; while this is doing, he washes the form thoroughly, as the least dirt remaining on it will destroy the beauty of that colour. The form is then laid, with its face downwards, on a letter-board covered with a press blanket. Those words marked to be red are then forced down (which the soft and spongy nature of the blanket readily admits of,) and nonpareil reglets nicely fitted into the vacancies, which raise the red lines and words all of an equal distance from the other matter. A sheet of paper is then pasted on the form, which keeps the underlays in their proper places. The form is again laid on the press, observing the utmost care in placing it, agreeable to the marks before made on the stone. It must then be made perfectly fast to the corner irons, as it is highly important that it remain firm and immoveable during its stay on the press. The frisket (which is covered with parchment,) is then put on, the form beat over with red ink, and an impression made on the frisket. The words so impressed are then cut out with a sharp-pointed penknife, with so much nicety as not to admit the smallest soil on the paper from the other matter.

The red being finished, and the form washed, the compositor unlocks it (which is best done on the imposing stone, as the pressman can easily replace it, by the marks made on the press,) and draws out the red words, filling up the space with quadrats. When this is done, the pressman cuts out the frisket for the black. An extra pair of points are used to prevent the black from falling on the red, which is termed *riding*.

When a very extensive number is to be printed, two forms are generally used, one for the red, and another for the black; the greatest care being taken by the compositor to have quadrat lines corresponding with every line in the black, and lead of equal thickness to cut for every rule.

There is another method of placing the underlays, which is adopted for broadsides, &c. with large letter, and with perhaps only two or three lines of red in them. The red lines are taken out on the press stone, and the underlays put in with a bodkin, upon which these lines are placed, and the frisket cut out as before-mentioned.

The following plan has been adopted with much success in smaller type. Having drawn out the lines or words, place in the vacancy m-quadrats laid down lengthways, cutting them, if necessary, to proper lengths; and filling up with quadrats. The black having been worked, then, by means of the bodkin, draw out the quadrats, and place in the words to rest on the horizontal laid m-quadrats: then lock up and work the red.

Balls or rollers having been once used for black, cannot be employed for any other colour; and as printing with red, &c. is but rarely performed, the balls for that purpose may be made of old parchment, well soaked, which may be done in a few minutes. These balls are made without stocks, and of a small size. For almanacks, broadsides, &c. where a large number is printed, composition balls or rollers are provided.

MIXING AND GRINDING COLOURS WITH VARNISH.

VARNISH is the common menstruum for all colours used in printing. Vermilion, with a small portion of lake, produces a beautiful red, which should be well ground with a muller on a marble slab, till it be perfectly smooth. If it be in the smallest degree gritty, it clogs the form, and consequently produces a thick and imperfect impression; no pains should therefore be spared to render it perfectly smooth; it may be made to work as clear and free from picks as black. Pale vermilion, when used by itself, gives a richer colour than that which is deeper. Venetian red makes a smooth ink with little trouble; Indian red is a very hard, harsh, colour to grind, yet produces an ink that is not difficult to work; and lake is made into ink with facility. A cheaper red may be prepared with orange mineral, rose pink, and red lead.

The Prussian blue makes also an excellent colour, but will require a good deal of time and labour to render it perfectly smooth. It is also ground with the best varnish, but made considerably thicker by allowing a greater portion of colour with the same quantity of varnish, than the red; it will then work clear and free from picks. As this colour dries rather rapidly, the balls will require to be frequently scraped or washed. Where a powerful blue is wanted, not very bright, Indigo will be serviceable; where a brighter

deep blue is necessary, Antwerpt blue is preferable to either, and makes a smooth ink with little trouble. White lead is used to vary the shade with any of the above.

Yellows are made from yellow ochre, gamboge, and chromate of lead. Yellow ochre grinds easily, and is a good colour where a dull yellow is wanted. Gamboge, which is a transparent colour, with Prussian blue, makes a fine green. Chromate of lead makes the brightest yellow. With blues it forms good greens, and is particularly easy to grind. King's yellow, the colour in general use, has a disagreeable smell, and is much inferior to chrome yellow. Patent yellow is also used. Greens may be prepared from verdigris and green verditer. Browns from burnt umber, and shaded according to fancy, with vermilion or orange red.

All these colours should be ground with soft varnish, being in themselves dryers, or they will so choke up the form, as to require it to be frequently washed, as well as dry and harden the balls or rollers, and soon render them useless. To the varnish should be added about one-fourth by weight of soft soap, as it keeps the heavier bodied colours much longer suspended, and does not so soon become hard when ground with Prussian blue or vermilion, which is always the case when the painter's common varnish is used.

ON BLACK INK.

An object of the greatest importance in producing good work, is the ink; and the improvements which have been made, not only in black, but also of those of every other colour, has caused a material alteration in the process of printing. The properties which good black ink ought to possess are, intenseness of colour; impalpableness; covering the surface perfectly of the type or engraving, when the paper is pressed on it; not smearing on the paper after it is printed; and retaining its first appearance without any change.

We have no colouring matter of itself which will give that intense black now required in printing ink; we are therefore obliged to have recourse to other colours to mix with the black, to produce the desired effect.

The colours generally used to give this intenseness are Prussian blue and indigo; and the quantities of these articles must vary according to the quality of the black colouring matter, or to the fancy of the person directing the manufacture of the ink; some preferring a dead black, some a brighter black, and others a black with a little bloom on it; and all these may be produced by varying the quantity of the Prussian blue or indigo.

The following receipt for black ink is given by Mr. Savage, in his *Practical Hints on Decorative Printing*, wholly discarding oil in its composition.

Balsam Capivi, 9 oz.; Best Lamp Black, 3 oz.; Prussian Blue, $1\frac{1}{2}$ oz;
Indian Red, $\frac{3}{4}$ oz; Turpentine Soap dried, 3 oz.

These ingredients will make rather more than 1 lb in weight, and should be ground on a marble or stone slab with a muller, to an impalpable fineness.

The varnish in general use is invariably made of boiled linseed oil; and it is well known that different degrees of boiling will produce different effects in the result, and there is no nice test for the proper degree; but it is left to the judgment of the individual who superintends it, who has only general rules to guide him, and who in consequence

will sometimes boil it more than he will at other times, so as to produce a material variation in the quality, which must ultimately affect the ink.

Few printers of any eminence in this country, attempt to be entire makers of their own ink, the improvement of the manufacturers' ink being the most that has been attempted by any printer of much practice, (with the exception of the late William Bulmer,) and this has been effected by regrinding or mixing the article with such additions as they thought might give a better colour, or a tint more congenial with their taste. Some add indigo or Prussian blue to the common ink of the makers, and thus considerably improve their colours. A printer ought to know that the weak ink, at eighteen-pence per pound, is only intended to produce a very pale black, for quick working and setting; the two-shilling a shade deeper; the three-shilling, if good, is well calculated for the general purposes of book-printing, when there are no fine cuts introduced, and, with care, will even answer for those purposes; the six shilling is suitable for all the uses of fine printing, and will produce, in its present improved state, as much effect as can be produced from the finer inks recently sold at nine and twelve shillings per pound. The colour of the work can be increased only by the quality of the ink; the better the quality of the ink the more time it will take the pressman to work it, and the better may be the paper; it is impossible to work fine ink upon bad paper, and no employer can expect his work to look well, if any restrictions are placed upon the respective commodities.

ON COMPOSITION ROLLERS AND BALLS.

It is curious to contemplate the various changes which have taken place in a press-room within the last thirty years, and in nothing more than in the introduction of composition balls and rollers, for the invention was at once the means of getting rid of the nauseous, filthy process in the pelt-house, and rendering a press-room as free from offensive effluvia as any other part of the office. Both a great saving of time and expense were effected. As this composition has now become one of the most essential requisites of a printing-office, it may not be improper to give both the ingredients of which the compo is made, and the method of making rollers and balls. The proportions have been so variously stated, and so much depends upon the state of the atmosphere, that it would almost be impossible to state with accuracy the exact quantity of each. But the simple prescription which experience has proved best, is, to provide *glue* of the finest quality, made from the cuttings of parchment or vellum; fine green *molasses*, pure as from the sugar refiner, at least not adulterated for the bakers' or grocers' shops; and a small quantity of the substance called *Paris-white*, and you will have every ingredient requisite for the compo. To two pounds of *glue* add six pounds of *molasses*, and about half a pound of *Paris-white*, which will make the compo of a superior quality to any other proportions, and will be sufficient for two demy rollers. Some persons only use the simple glue and treacle, while others use a small quantity of isinglass, or a few drops of sweet oil. It is necessary to procure a mould accurately made, and well finished, made either of brass or iron, in two parts, and adjusted to each other with rebates, the inside being finely turned and polished, and having flanches projecting, by which the parts are screwed together by screws and a lock-burr.

The next material part of the apparatus is the *melting kettle*. This must be a double vessel like a glue-kettle, so that the compo in the interior may be melted by the heat of the boiling water in the exterior. For this purpose a strong boiler may be the best or readiest thing found, into which let a tin vessel be fitted, with a flanch to rest on the rim, so as to leave one or two inches clear under it. This vessel may be six or eight inches above the top of the boiler, so that the lid of the one may fit the other; and it must have a large lip for pouring the compo. Being thus prepared, put the glue into a little water for a few hours to soak. Pour off all the liquid, and put the glue into the inner vessel, the boiler having in it as much water as it will contain when the inner vessel is in its place. Put it on the fire and boil the water as quick as you please, the heat of which will soon cause the glue to dissolve, and evaporate part of the water. Let them be well incorporated together for at least an hour, receiving heat from the boiling water, which is a uniform degree that cannot exceed 212° . If Paris-white be added, mix the powder with a very fine sieve, frequently stirring the compo. In about an hour, it will be fit to pour off; then take the inner vessel out of the boiler, and pour the mixture gently into the mould. If poured into the mould at night, it will be ready to take out the next morning. When taken out of the mould, hang it in a cool, dry situation, until ready for use. As there will be rather more of the compo at each end of the cylinder than would work clear of the frame in which it is to revolve, so much must be cut off from each extremity as is necessary for the working of the roller, by encircling it with a piece of fine twine.

To keep the rollers thus made in good condition for working, a place should be chosen where the air has free circulation, without being subject to the extreme heat of the sun in summer, or the freezing damp air in winter: in short, in as even a temperature as possible. It will be necessary to keep a stock of more rollers than are at work; as it is frequently found, when a roller is *sick*, greasy, or soft, or you do not know what is its ailment, that washing it clean and hanging it to rest for a time, restores it to as good a state as ever.

Notwithstanding the general use of compo rollers, balls will be found sometimes necessary to vary the mode of work. Cards, single cuts, light forms, &c. may require the experiment, at least, of a change. In order to make the compo balls, a mould will be required, made from a circular plate of copper or tin, nicely planished, and beaten concave so as to sink in the centre about half an inch; which is often turned over a wire at the circumference, and supported to a level by three little feet. To wash the rollers or balls made with this compo, nothing more is requisite than the application of water, in cold frosty weather a little warmed, but cold as possible in warm weather, which needs only be used with the hand. Before they are worked again after washing, about an hour's drying will be necessary. Sometimes, if from the effect of bad ink they show an appearance of grease, and make friars, a mixture of spirits of turpentine and water will be necessary; or a little pearl ash lye. If becoming soft by a sudden change of the atmosphere, a washing in spirits of turpentine will harden them. If by a cold or dry night they are found too hard at first getting to work in the morning, a few turns at a moderate distance from the fire, or over the flame of a burning sheet of paper will be the remedy. They sometimes get into such a state as to require the flame of a candle to be passed over the whole face, which must be done with the greatest care and patience.

To make the smaller rollers for jobs or galleys, you may unite, with plugs of wood,

two or three together; or you may have the open keepers, with double projections to place between each when you fill the mould. They are easily divided by the cord as above directed. If you have old compo remaining, and find it necessary to renew either rollers or balls, a small portion of the fresh material must be incorporated with it. But, as the rules already given can alone determine the proportions requisite to make the compo harder or softer, it will not be possible to lay down the precise quantities of the respective ingredients that may in such cases be proper. The molasses, or vegetable substance, will certainly evaporate and become impoverished by frequent meltings: the glue, or animal substance, will grow harder: the earthy substance will retain its quality: but a little addition of new spar will be necessary to clear and bind the whole together. The rollers are found to answer every description of work—for the largest or smallest type—the lightest or heaviest form—all solid type, or all rule work—for the strongest or weakest ink—for black, or red, or any colour; and indeed, upon the whole, the introduction of the invention constitutes a new era in the art of printing.

ON PAPER.

The quality of paper is of great consequence in the production of good printing; but it is too frequently overlooked by all parties. Every pressman of attention perceives a material difference in the process of bringing off a sharp impression: according to the quality of the paper, it requires more than common care to make his work look well—to make it good, it frequently defies his utmost abilities. Nothing can be more perplexing to a printer, nor more detrimental to his labours, than what is termed *bleached paper*; for although it may be thick and seem strong in the ream, no sooner does the water penetrate than it loses its adhesive quality, and becomes so loose and soft, as scarcely to bear handling, and in working sinks down into the letter, leaving a portion of its substance on the form after the impression, until it so clogs the type that the work is often rendered scarcely legible. Nor is it less exceptional in point of durability, as it must moulder away in a little time. Another obstacle against the production of good printing, was the introduction of cotton rag, and likewise ground plaster of Paris, called *gypsum*, into the manufacture of fine and other papers.

CONCLUSION.

It must be gratifying to those immediately interested in the advancement of the liberal arts, and the professions connected with them, as well as to those who contemplate them with a patriotic regard, to witness the present state of British typography. Baskerville, many years ago, gave the first impulse to improvement; and it has since continued to increase through almost every part of the kingdom. As it was found very difficult to obviate some of the impediments which retarded our early improvement, the printers of the continent, who from being less subject to the versatilities of climate, and from other circumstances, had a clearer path before them, took the lead for a considerable time in

beauty of workmanship. Hence the works of several foreign printers have acquired them a distinguished celebrity throughout the learned nations at a much earlier period of the art; but there is a satisfaction in reflecting that names are now to be met with among our own countrymen, as eminently celebrated in this admirable art as those of any who have been before them. By those only who have attempted to carry the art to perfection can the attendant difficulties be truly conceived: and, after the toil of years in the pursuit, how few the instances where fame has been the reward, how still more limited those where opulence has been the harvest of the toil. Emulation is a powerful principle in our nature; and the success which attended the exertions of Bensley, Bulmer, and M'Creery, contributed in a great degree to give a new tone and character to the profession. The improvements which have taken place in all the arts connected with the letter-press printing have acted, no doubt, powerfully in stimulating the printers of this country to that extraordinary exertion by which such fine specimens of typographic beauty are now so frequently produced.

The great improvements in type-founding have proved an additional spur to the printer; and fine printing has of late been attempted by so many professors of the art, and so numerous and variable are the specimens they have produced, that a discrimination as minute as that which is required in forming an opinion of those of the pencil and the burin, seems necessary in judging of what is really superior in typography. Some printers imagine, if they do but make their pages sufficiently black, that the end is gained; others, if they are pale and clear; so that each exhibits a style peculiar to his own fancy. In typography, as in the fine arts, it is difficult to specify and investigate the qualities which constitute excellence and beauty.

Fashion and fancy commonly frolic from one extreme to another. From the razor-edged fine lines and ceriphs of types, to the unnatural shape of turning all the ceriphs and fine strokes into fats, and the fats into leans. From the broad Egyptian, to the tall condensed, by turns take the lead, until the ingenuity of the type founder produces something *new*, to please the fancy of the printer, who of course wishes to be in the fashion. A great improvement has most certainly taken place in borders and corners, which for the present are all the rage in cards and circulars.

Those who have had opportunities of inspecting the early productions of the press, will be convinced that the art became retrograde in the course of time; for there are yet in existence works of the fifteenth and beginning of the sixteenth centuries, which, whether examined with regard to case or press, will bear a near comparison with any that are now produced. It has been previously remarked that printing, immediately on its invention, made singularly rapid advances to perfection, which may be easily accounted for by the facilities it afforded to the purposes of society, and more especially to the cause of literature; and the unexampled patronage it thus obtained, as being one of the most honourable vestibules to human glory.

"Hail noble art, by which the world,
Though long in barbarism hurl'd,
Sees blooming learning swift arise
And science wafted to the skies.

Aided by thee, the printed page,
Conveys instruction to each age;
When in one hour more sheets appear,
Than scribes could copy in a year."

TECHNICAL TERMS USED BY PRINTERS.

Abbreviations. Marks to contracted words.
Accents. Marks over vowels.
Ball knife. A knife used to scrape the balls.
Ball nails. Tacks used in knocking up balls.
Bank. A stage about four feet high, placed near the press.
Batter. When any part of a form is injured or broken, it is said to be battered. Printers neglecting their work, and being intoxicated, are likewise said to be on the batter.
Beard of a Letter. The outer angle of the square shoulder of the shank, which reaches almost to the face of the letter, and commonly scraped off by foundlers.
Bearer. A piece of reglet, or cork, to bear the impression off a blank page.
Bienvenue. The fee paid on admittance into a chapel.
Bite. Is when the entire impression of the page is prevented by the frisket's not being sufficiently cut out.
Body. The shank of the letter.
Bottle-arsed. When letters are wider at the bottom than the top.
Bottom-line. The last line of a page.
Break. A piece of a line.
Broadside. A form of one full page, printed on one side of a whole sheet of paper.
Broken letter. By broken letter is not meant the breaking of the shanks of any of the letters, but the breaking of the orderly succession the letters stood in a line, page, or form, &c. and mingling the letters together, which mingled letters are called pie.
Bur. When the foundler has neglected to take off the roughness of the letter in dressing.
Cards. About a quire of paper, which pressmen use to pull down the spring or rising of a form, which it is many times subject to by hard locking up.
Cassie paper. Broken paper.
Choak. If a form be not washed in due time, the ink will get into the hollows of the face of the letter; and that getting in of the ink is called choaking of the letter, or choaking of the form.
Clean proof. When a proof has but few faults in it, it is called a clean proof—the author's proof.
Close matter. Matter with few breaks.
Companion. One journeyman working on the same job with another.
Correct. When the corrector reads the proof, or the compositor mends the faults marked in the proof, they are both said to correct; the corrector the proof, the compositor the form.
Corrections. The letters marked in a proof.
Devil. The errand boy of a printing-office.

Double. Among compositors, a repetition of words; also, among pressmen, a sheet that is twice pulled.
Dressing a chase, or form. The fitting the pages and chase with furniture and quoins.
Drive out. When a compositor sets wide.
Empty press. A press that is unemployed.
Even page. The 2d, 4th, 6th, 8th, or any other even numbered page.
Fat. When a white page or more happens in a sheet, the compositor calls it fat: so does the pressman, when a form of one pull comes to the press.
Fat face. Or fat letter, a broad stemmed letter.
Fat work. Is when there are many white lines or break lines in a work.
Fat form. When the pressman has a single pull.
First form. The form the white paper is printed on, which generally has the first page of the sheet in it.
Fly. The person that takes off the sheet from the press in cases of expedition.
Follow. That is, see if it follows; is a term used as well by the corrector as by the compositor and pressman. It is used by the corrector and compositor when they examine how the beginning matter of a succeeding page agrees with the ending matter of a precedent page; and how the folios of those pages properly and numerically follow and succeed one another, lest the pages should be transposed. But the pressman only examines that the folio and beginning word of the second page and signature of the first and third page, when the reiteration is on the press, follows the folio and direction of the first page, and the signature of the third page follows the signature of the first page, lest the form should lay wrong on the press.
Foot of a page. The bottom or end of a page.
Form. The pages when fitted into a chase.
Foul proof. When a proof has many faults marked in it.
Fount. The whole number of letters that are cast of the same body and face.
Friar. When the roller or ball does not take, the un-taking part that touches the form will be left white; or if the pressman skip over any part of the form, and touch it not with the balls, though they do take, yet in both these cases the white places are called friars.
Full form or page. A form or page with few or no breaks or white lines.
Full press. When two men work at the press.
Fudge. To contrive without necessary materials, or to work in a bungling manner.

Get-in. Matter is got in a line, page, sheet, or book, if letter be thinner cast than the printed copy the compositor sets from; or matter is got in if the compositor sets closer.

Good colour. Sheets printed neither too black nor too white.

Good of the chapel. Forfeitures and other chapel dues collected for the good of the chapel, to be spent as the chapel approves.

Good work. Is so called in a two-fold sense: the master-printer call it good work when the compositors and pressmen have done their duty; and the workmen call it good work if it be light, easy work, and they have a good price for it.

Half-press. When but one man works at press.

Half work. He that works but three das in the week does but half work.

Head page. The beginning of a subject.

Heap. So many reams or quires as are set out by the warehouseman for the pressman to wet.

Heap holds out. When it has its full number of sheets.

Holds out or not holds out. These terms are applicable to the quires of white paper, to wrought-off heaps, to gathered books, and sorts of letter, &c. If quires of white paper have twenty-five sheets each in them, they say, the paper holds out five and twenties. Of wrought-off heaps, the heap that comes off first in gathering is said not to hold out. Of gathered books, if the intended number of perfect books are gathered, they say the impression holds out; but if the intended number of perfect books cannot be gathered off the heaps, they say the impression holds not out. And so for sorts of letter.

Horse. The stage on which the pressmen set the heaps of paper on their banks.

Horse. If any journeyman set down in his bill on Saturday night more work than he has done, that surplus is called horse.

Hours. Pressmen reckon their work by hours, reckoning every token to be an hour's work; and though it be the same effectually with tokens, yet they make their prices of different work by the hour, and it passes current for a token. If two men work at the press, ten quires is an hour; if one man, five quires is an hour.

Imperfections of letters. When the founder has not cast a proportionable number of each sort of letter, it is making the rest of the fount imperfect.

Insertion. If the compositor has left out words or lines, the corrector inserts them, and makes this mark A where they are left out.

Keep in. Is a caution either given to, or resolved on, by the compositor, when there may be doubt of driving out his matter beyond his counting off, wherefore he sets close to keep in.

Keep out. A practice opposed to the preceding.

Kern of a letter. That part which hangs over the body or shank.

Lean face. A letter whose stems and strokes have not their full width.

Letter hangs. If the compositor is careless in emptying his composing stick, so as to set the

letter loosely down in the galley, and they stand not perfectly square and upright, the letter hangs; or if after overrunning on the correcting stone, he has not set his letter in a square position again, before he locks up, the letter thus out of square is said to hang.

Long pull. Is when the bar of the press requires to be brought close to the cheek to make a good impression.

Low case. When the compositor has composed almost all the letters out of his case.

Mackle. When part of the impression on a page appears double.

Matter. The series of the discourse of the compositor's copy; also the letter, when composed.

Measure. The width of a page.

Mike, or Shammock. When a person neglects his duty for his own recreation, or through sheer idleness.

Monk. When the pressman has not distributed his rollers, and the ink lies in blotches.

Naked form. When the furniture is taken from about all the sides of the pages.

Odd page. The 1st, 3d, and all uneven pages.

Off. Pressmen are said to be off when they have worked off the designed number from a form.

Out. A compositor is said to be out when he has composed all his copy.

Out of register. When pages are not worked even on each other.

Pale colour. When the sheets are worked pale.

Picks. When any dirt gets into the hollows of the letter, which chokes up the face of it.

Point holes. Holes made by the points in a worked-off sheet of paper.

Press goes. When the pressmen are at work.

Pie. When a page is broken, and different sorts of letter mixed together.

Quarters. Octavos and twelves forms are said to be imposed in quartos, not from their equal divisions, but because they are imposed and locked up in four parts.

Qui (Quietis.) Discharge from employment.

Register-sheet. A sheet or sheets printed to make register with.

Reiteration. The second form, or the form printed on the back-side of the white paper.

Reglet. A thin sort of furniture, of an equal thickness all its length. It is quadrate high, of various thicknesses.

Rise. A form is said to rise, when in lifting it off the correcting stone no letter or furniture, &c. drop out.

Runs on sorts. When only a few sorts of letters are used in a work.

Set off. Sheets that are newly worked off at the press often set off, and more particularly so when beaten with soft ink.

Shank. The square metal the face of a letter stands on.

Signature. Any letter of the alphabet used at the bottom of the first page of a sheet, as a direction for the binder to place the sheets in a volume.

Slur. When the impression of the sheets appear smeared.

Smout. When either compositors or pressmen are employed for a short time, and not engaged for a constancy.

Sop the balls. When a pressman has taken too much ink.

Sorts. The letters that lie in the different boxes of the cases are separately called sorts.

Squabble. A page or form is squabbled when the letters of one or more lines are got into any of the adjacent lines; or that the letter or letters are twisted about out of their square positions.

Stem. The name given to the straight, flat strokes of a straight letter.

Superior letters. These are often set to marginal notes, references, or authorities; they are letters of a small face, justified by the founder in the mould near the top of the line.

Thin space. Ought by a strict, and methodical measure, to be made of the seventh part of the body; though founders make them indifferently thicker or thinner.

Turn for a letter. It often happens, when matter runs upon sorts, especially in capitals or some other sorts seldom used, that the compositor wants that sort the matter runs on; wherefore he is loth to distribute letter for it, as perhaps his case is otherwise full. Then, instead of that letter or sort, he turns a letter of the same thick-

ness, with the foot of the shank upwards, and the face downwards; which turned letter being easy to be seen, he afterwards when he can accommodate himself with the right sort, takes out, and puts the right letter in its room. It is also a word used jocosely in the chapel; when any of the workmen complain of want of any thing, he shall by another workman be answered, Turn for it: that is, make shift for it.

Vantage. When a white page or more happens in a sheet, the compositor calls that vantage: so does the pressman, when a form of one pull comes to the press.

Underhand. A phrase used by pressmen for the light and easy, or heavy and hard running in of the carriage. Thus they say, the press goes light and easy under hand, or it goes heavy or hard under hand.

Upper hand. When the spindle goes soft and easy, the pressmen say, it goes well upper hand, or above hand. But the contrary if it goes hard and heavy.

White-line. A line of quadrats.

White page. A page that no matter comes in.

White paper. Although the first form be printed off, yet the pressmen calls that heap white paper, till the reiteration be printed.

By the Act 13 Geo. II. c. 19, (*to restrain and prevent the excessive increase of horse races, &c.*) it is enacted, "That every person or persons who shall make, print, publish, advertise, or proclaim any advertisement or notice of any plate, prize, sum of money, or other thing, of less value than £50 to be run for by any hores, mare, or gelding, shall forfeit and lose the sum of £100."

By the Act 25 Geo. II. c. 36, (*for the better preventing thefts and robberies,*) it is enacted, "That any person publicly advertising a reward with 'No questions asked,' for the return of things which have been stolen or lost, or making use of any such words in such public advertisement, &c. shall for every such offence forfeit £50."

By the act 39 Geo. III. sec. 29, it is enacted, "That every person who, from and after the expiration of forty days after the passing of this act, shall print any paper for hire, reward, gain, or profit, shall carefully preserve and keep one copy (at least) of every paper so printed by him or her, on which he or she shall write, or cause to be written or printed, in fair and legible characters, the name and place of abode of the person or persons by whom he or she shall be employed to print the same: and every person printing any paper for hire, reward, gain, or profit, who shall omit or neglect to write, or cause to be written or printed as aforesaid, the name and place of his or her employer, on one of such printed papers, or to keep or preserve the same for the space of six calendar months next after the printing thereof, or to produce and shew the same to any justice of the peace, who, within the said space of six calendar months shall require to see the same, shall, for every such omission, neglect, or refusal, forfeit and lose the sum of £20."

Form of notice to be given to the clerk of the peace, that any person keeps any printing press or types for printing.

To the clerk of the peace for———[here insert the county, stewartry, riding, division, city, borough, town, or place,] or his deputy.

I, A. B. of———do hereby declare that I have a printing press and types for printing, which I propose to use for printing within———, and which I require to be entered for that purpose, in pursuance of an act passed in the thirty-ninth year of the reign of his majesty king George the third, entitled, "An act for the more effectual suppression of societies established for seditious and treasonable purposes, and for better preventing treasonable and seditious practices."

Witness my hand this———day of———.

Signed in the presence of———.

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